Name	Address	City	State	Zip	Latitude	Longitude	Year	Total On and Off-Site Releases (in lbs)	Surface Water Discharges (in lbs)
ADGRAPHICS WEST	5355 LOUIE LANE, RENO NEVADA 89511 (WASHOE)	RENO	Nevada	89511	39.4732	-119.7688	2001	0.451	0
Only permitted industry at this address is for Fox Performance. Haz 2 901577-01									
AMERICAN WATER HEATER CO.	14291 LEAR BLVD., RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64259	-119.8889	1998	17741	0
No permit at this address. 887379-01									
BTS GROUP	4855 LONGLEY LN., RENO NEVADA 89502 (WASHOE)	RENO	Nevada	89502	39.48312	-119.7621	2000	0	0
No Permit at this address since 2004, Out of business as of 2004, no permitted business at address.									
CEMEX CONSTRUCTION MATERIALS LP - RENO RM I	333 GALLETTI WAY, RENO NEVADA 89512 (WASHOE)	RENO	Nevada	89512	39.53437	-119.7805	2009	251	0
Permitted/inspected facility under COR-00010 for potential storm water issues, vehicle maintenance at different location.									
CHEVRON PHILLIPS CHEMICAL CO PERFORMANCE P	14381 LEAR BLVD, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64263	-119.892	2011	30	0
Currently listed as Performance Pipe. Permitted under 895041-01 as a Class 2									
COLD CHAIN TECHNOLOGIES	6640 ECHO AVE SUITE E, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.65474	-119.8989	2009		
This business not permitted.I Multi-plex building, only permitted industry is YAJIMA USA LIMITED, 1004001-01, Hazard 2									
COOPER B-LINE INC-RENO NV	13755 STEAD BLVD, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64218	-119.8818	2011	255	0
Permitted/inspected facility, Hazard Class 4, Non-SIU Categorical Industry.									
CRUMRINE MANUFACTURING	145 CATRON DR, RENO NEVADA 89512 (WASHOE)	RENO	Nevada	89512	39.57021	-119.8219	2000	8984	0
Out of business as of 02/06/09, currently not occupied with a permitted industry.									
DUPONT RENO WESTERN DISTRIBUTI ON CENTER	11535 PRODUCTION DR, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64116	-119.8922	2006	24.8	0
Currently permitted/inspected as a Hazard 2 facility									
EE TECHNOLOGIES INC	9455 DOUBLE R BLVD, RENO NEVADA 89521 (WASHOE)	RENO	Nevada	89521	39.44772	-119.76	2011	0	0
Currently permitted/inspected as a Hazard 2 facility									
HV MANUFACTURING CO	12150 MOYA BLVD, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64708	-119.8969	1998	4	0
Currently permitted/inspected as a Hazard 2 facility									
INTERNATIONAL GAME TECHNOLOGY	9295 PROTOTYPE DR, RENO NEVADA 89521 (WASHOE)	RENO	Nevada	89521	39.44909	-119.7616	2005		
Currently permitted/inspected as a Hazard Class 3, Non-Categorical SIU									
ITRONICS METALLURGICAL INC.	14305 MT. MCCLELLAN ST, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.65853	-119.8847	2008	0	
Permitted/inspected facility, Hazard Class IV facility									
MARTIN IRON WORKS INC.	530 E. 4TH ST., RENO NEVADA 89512 (WASHOE)	RENO	Nevada	89512	39.53131	-119.8069	1989	52800	0
Currently permitted/inspected as a Hazard Class 2 facility									
MASTER-HALCO INC	14331 LEAR BLVD, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64264	-119.8926	2005	5231.4	17
Out of business. Currently permitted/inspected as PENSKE TRUCK LEASING CO LP, Class II facility.									
MICHELIN NORTH AMERICA INC	14551 INDUSTRY CIRCLE SUITE B, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.65689	-119.8906	2002	4400	0
No permitted industry at this address. 900004.									
MODEL DAIRY LLC	500 GOULD ST, RENO NEVADA 89502 (WASHOE)	RENO	Nevada	89502	39.52341	-119.7918	2005	0	0
Permitted/inspected as a Class III facility.									
PARADISE MFG INC	4098 S MCCARRAN BLVD SUITE C, RENO NEVADA 89502 (WASHOE)	RENO	Nevada	89502	39.47689	-119.7697	2010	0	0
Paradise MFG, Inc. is out of business, now Cube Services, Inc and permitted/inspected as a Class II facility.									
PRO LINE PRINTING / RR DONNELLEY	365 PARR CIR, RENO NEVADA 89512 (WASHOE)	RENO	Nevada	89512	39.57218	-119.8143	2010	3600	0
Permitted/inspected as a Class II facility.									
RR DONNELLEY	14100 LEAR BLVD, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64235	-119.8818	2011	278107	0
Permitted/inspected as a Class III facility.									
SIERRA CHEMICAL CO	1490 E. SECOND ST., RENO NEVADA 89502 (WASHOE)	RENO	Nevada	89502	39.52667	-119.7917	1989	0	0
No longer at this address, moved to 2302 Larkin Circle, Sparks, NV 89431.									
SUN CHEMICAL CORP	7970 SECURITY CIR, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.59484	-119.8352	2011	583	0
Out of business as of 06/30/2011, but was permitted/inspected while operational prior to closing.									
THYSSENKRUPP VDM USA INC RENO	14255 MOUNT BISMARK ST, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.6587	-119.8828	2011	3179	0
Name change to Outokumpu VDM USA, LLC and permitted/inspected as a Class 4 facility.									
TYCO VALVES & CONTROLS RENO	9025 MOYA BLVD, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.63191	-119.9163	2011	10	0
Permitted/inspected as a class V facility.									
VEKA WEST INC	14250 LEAR BLVD, RENO NEVADA 89506 (WASHOE)	RENO	Nevada	89506	39.64245	-119.8874	2011	0	0
Permited/inspected as a Class II facility.									

Memo

To: File

From: Andy Hummel, P.E.

CC: Ron Korman, Dan Hamlin

Date: 5/31/2013

Re: Raincheck Stormwater Training, attendees list

On May 30, 2013, Public Works Maintenance staff was presented a 30 minute training video entitled: Raincheck Stormwater Pollution Prevention for MS4s. This was followed by a 15-question quiz. The following staff members were in attendance:

Andy Hummel
Sergio Hernandez
Mark Reynolds
Karl Martin
Chad Walker
Richard Griffin
Byron Jennings
Ryan Anderson
Jeff Wright
Clint Larson
Frank Petersen
Jeff Parmenter
Bo Collins
Brian Anderson
Buck Larsen
T.J. Turrietta
Jonathan Wood
Garrick Wrenn
Ernie Cisneros
Bryce Lallement
Dan Hamlin
Jacob Reed
Ryan Thran
Mike Trussell
Lawrence Kolstrup
Justin Kistner
Clint Kunishige
Larry Ventimielia
Eli Espinosa
Andy Simpson
Casey Bond
James Needham
Paul Henry Jr.
Mike Kelly
Terry Shackelford
Heather Key
Mark Anderson
J.D. Kiley
Jesse Hon
Andrew Robbins
David Lewis
Charles Sauer
Maurice Holmes
Gordon Pasley
Daniel Keyes
Keith Vanslyck
Bruce French
Brandon Miles
Ron Korman
Darlene Turner
Jason Knoblock
Nick Diaz
Rob Miller
Michael Ginocchio
Jim Bass
Wayne Yount
Klayton Bailey
Danno Seaton

TRAINING SIGN-IN SHEET

Course: Illicit Discharge Detection and Elimination Instructor: Brandon Baxter

DATE	NAME	SIGNATURE	DEPARTMENT
1/31/14	Klayton Bailey		Effluent
	Danno Seeton		A-Team
	CLINT LARSON		Traffic Paint
	Richard Griffin		Storm utility
	Maurice Holmes		Sewer
	ROB MELLER		DRAINS
	Larry Kolstrup		Streets
	RYAN THRAN		DRAINS
	Eddie Hon		PARKS
	GORDON PASLEY		GARAGE
	Buck Larsen		Parks
	Darlene Turner		Streets
	Mike Trussell		P.W.
	Jeff Pr...		Sewers
	DAVID LEWIS		SEWERS
	Bo Collins		Effluent
	Jeff Wright		Traffic Paint
	Byron Jennings		Sweeper
	Brian Anderson		Sewers
	Jason Knoblock		Sewers
	Chuck Sauer		Sewers
	MARK REYNOLDS		Parks
	ERNIE GUERRERO		PARKS
	BRYCE ALLEMENT		STREETS
	Brandon Baxter		Eff.

TRAINING SIGN-IN SHEET

Course: Illicit Discharge Detection and Elimination

Instructor: Brandon Baxter

DATE	NAME	SIGNATURE	DEPARTMENT
1/31/14	Keith VanSlyck		PARKS
	Garrick Wrenn		Parks
	Michael Kelley		Forestry
	Heather Key		Garage
	Marty Robbins		PARKS
	Jon Bass		Drains
	Michael Ginocchio		Drains
	Casey Bond		Parks
	T. Bailey		Traffic
	Wayne Kent		Elec
	Daniel Keyes		garage
	Andy Hummel		Engineering
	Scott Robbins		Grounds
	Dennis Whit		Parks
	Jon Ward		Garage
	Dan Jenkins		Drains
	Mark Anderson		Traffic
	Ryan Anderson		Bldgs
	Dick Kirby		Drains
	Nick Diaz		Drains
	Jacob Reed		Street
	TJ Tillotta		garage
	Clint Kunisville		Drains
	Terry Shackelford		Garage
	J. E. Thom	J. E. Thom	Drains

Memo

To: Brandon Baxter

From: Andy Hummel, P.E.

CC: Toby Ebens

Date: 02/25/2014

Re: Stormwater Training plan – Sparks Maintenance

Based on our recent conversations, the Stormwater Training Plan for Sparks Maintenance is:

Twice annually (January and July) provide stormwater refresher training. This will typically be done during the regularly scheduled monthly Safety Meeting. Typical agenda will be:

- Watch employee training DVD
- Perform group review quiz
- Document attendees

The City currently has two DVD's: "Raincheck Stormwater Pollution Prevention for MS4's" and "IDDE – a Grate Concern"

Additionally, new hires shall be provided similar training as part of new-hire orientation.

Maintenance Facility Stormwater Plan

For:

431 Prater Way
Sparks, NV 89431
775-353-2375

FSWP Contact:

Andrew Hummel, P.E.

FSWP Prepared by:

Nichols Consulting Engineers
1885 S. Arlington Ave, Suite 111
Reno, NV 89509
(775) 329-4955
Fax: (775) 329-5098

February 2014

2013 Facility Stormwater Plan
City of Sparks – Maintenance Facilities
Sparks, Nevada

Nichols Consulting Engineers (NCE) prepared this document at the direction of the City of Sparks (CoS) for the sole use of CoS and their consultants, the only intended beneficiaries of this work. No other party should rely on the information contained herein without the prior written consent of CoS. This report and the interpretations, conclusions, and recommendations contained within are based, in part, on information presented in other documents that are cited in the text. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.

Table of Contents

Section 1: Introduction

1.1 Purpose

The basis for federal control of water pollution was established in 1972 with the passage of the Federal Water Pollution Control Act. In 1977, the Clean Water Act as we know it was promulgated. The Environmental Protect Agency (EPA) passed the stormwater rules under the Clean Water Act in November 1990. This stormwater facilities plan is being developed to assist the City of Sparks (CoS) with implementing their Stormwater Management Plan (SWMP) at four facilities. These facilities include a main maintenance services site and three satellite material sites for the storage and distribution of city maintenance materials.

A Maintenance Facility Stormwater Plan (FSWP) for the CoS presented herein includes discussion of each of the four maintenance facilities. The purpose of the FSWP is: (1) to identify pollutant sources at each maintenance facility potentially affecting the quality and quantity of storm water discharges; (2) characterize existing and make recommendations for future Best Management Practices (BMPs) (3) provide measurable goals for the implementation of this FSWP to reduce the discharge of the identified pollutants into the storm drain system and associated water ways.

1.2 Organization of the FSWP

This manual describes the City of Spark's Maintenance Facility Stormwater Plan, including each of the four maintenance facilities. Although the activities at each of the four facilities vary (see **Section 2**), the potential sources of pollutants and significant materials are similar (see **Section 3**). Therefore, the BMPs, employee training, and inspection schedule are common across all facilities.

This manual identifies the FSWP's implementation team members, describes each of the four facilities (including information regarding the facility's location, activities, frequency of use, and stormwater drainage system), identifies potential sources of pollutants, and BMPs necessary to reduce pollutants in storm water discharge. This plan also includes a facility inspection schedule, employee training requirements, and provisions for amendment of the plan.

Section 2: Background

The CoS employs operations, maintenance, custodial, and grounds staff for day-to-day operations. This includes building maintenance (cleaning, painting, and repairs), daily cleaning of common buildings, grounds maintenance, small construction jobs, and various repair and maintenance activities.

2.1 Description of the Four Maintenance Facilities

2.1.1 Site Location and Activities

The CoS operates and maintains four maintenance yards all within Sparks city limits. The Main Yard is the Maintenance Services Center and operates daily. The yards at Pacific Avenue, Loop Road and Golden Eagle Park are also used daily. All of the sites, with the exception of the Pacific Avenue Maintenance Yard, have activities that occur outdoors and indoors (i.e. within a covered building and not exposed to stormwater). **Table 1** provides the location and activities occurring at each of the four maintenance yards.

Table 1: Maintenance Yard Locations and Description

Maintenance Facility	Address	Primary Activities	Description of Activities
Main Yard	215 South 21st Street	Maintenance Services, Main Office	The site houses heavy machinery, equipment maintenance and cleaning, vehicle storage, washing facilities and significant materials storage (e.g. paint, fertilizer, salt and sand). Additional maintenance materials are stored at the west end of the site.
Pacific Avenue Yard	1989 Pacific Avenue	Indoor Chemical Storage	The site houses maintenance materials storage, and vehicle parking. There are no outside activities and paint and other materials are stored inside.
Horsemen's Yard	End of Loop Road	Snow and Ice Control	The site houses equipment storage, a sweeper fill station and dump, and stockpiles of sand, soil and rocks. There is covered storage of deicing and snow control materials.
Yard at Golden Eagle Park	6360 Touchdown Drive	Fertilizer and Synthetic Turf Storage	The site houses storage of chemicals for weed control, storage of roadway sand and salt. A street sweeper is stored in the garage.

2.1.2 Site Maps

A site map for each of the four maintenance facilities is provided in **Appendix A**.

2.2 Receiving Waters

Stormwater is conveyed to the municipal stormwater drainage system and ultimately discharges into the Truckee River.

2.3 Facility Stormwater Plan (FSWP) Implementation Team

The implementation team is responsible for implementing, maintaining, and revising the FSWP. The members of the team are familiar with the management and operations of each of the four Maintenance Facilities. The members of the team and their responsibilities are described in **Table 2**.

Table 2: Facility Stormwater Plan Implementation Team

Name and Title	Contact	Responsibilities and Duties
Andrew Hummel, P.E., Utility Manager	431 Prater Way Sparks, NV 89431 775-353-2375	Oversee implementation of the plan. Review annual report. Ensure that any changes in the facility activities are amended to the plan.
Dan Hamlin Maintenance and Operations Manager	215 S. 21st Street Sparks, NV 89431 775-353-2271	Manage the day-to-day implementation of the plan. This includes, but is not limited to, implementing, maintaining, record keeping, submitting reports, conducting inspections, employee training, conducting annual report.
Toby Ebens Environmental Control Supervisor	8500 Clean Water Way Reno, NV 89503 775-861-4152	Oversee implementation of the plan. Provide environmental health and safety support in the event of non-stormwater discharges, spills, etc...

Section 3: Facility Operations

3.1 Stormwater Drainage System

The Main Yard has three drainage areas – two AC pavement areas surrounding the Maintenance Services Center and one compacted gravel area at the west end of the yard. The Pacific Yard is the smallest site, and has one drainage area. Horsemen's Yard has three drainage areas, with existing structural controls at the Upper Stockpile Storage Area (i.e. rip rap) along the east perimeter of the site. One area of AC pavement flows to separate drop inlets. The Yard at Golden Eagle Park has one drainage area. **Table 3** describes the locations of the drainage areas and the apparent storm water drainage patterns depicted in the Site Maps (See **Appendix A**).

Table 3: Stormwater Drainage System

Maintenance Facility	Total Site Size (acres)	Drainage Area (DA) [1]	Stormwater Drainage System
Main Yard	7	DA 1A	**Maintenance Services and Parking Area:** Sheet flow across the AC pavement to drop inlets and an existing conveyance system adjacent to the Maintenance Services Building (east side). A washing area at the north end of the drainage area also contributes stormwater to the existing conveyance system. A PCC swale also collects runoff adjacent to the site (on S. 21st St.).
		DA 1B	**Vehicle Garage and Covered Storage Area:** Sheet flow across the AC pavement to drop inlets and an existing conveyance system adjacent to the Maintenance Services Building (west side).
		DA 1C	**Maintenance Materials Storage Area (West Side of Site):** Overland flow across the compacted gravel area to storm inlets east of the materials storage area.
Pacific Avenue Yard	0.50	DA 2	**Main Storage Area:** Sheet flow across AC pavement to main drop inlet in the middle of the yard to an existing conveyance system. Drop inlets on the west and south side of the main building collect stormwater. A PCC swale collects runoff adjacent to the site (on Pacific Ave.)
Horsemen's Yard	15	DA 3A	**Lower Stockpile Storage Area:** Overland flow across the compacted gravel area to south end of the site (towards Loop Rd.)
		DA 3B	**Upper Stockpile Storage Area:** Overland flow across the compacted gravel area to existing rip rap drainage channels along the eastern perimeter of the site.
		DA 3C	**Paved Area South of Covered Storage:** Sheet flow across AC pavement to two drop inlets at the southwest corner of the site.
Yard at Golden Eagle Park	1	DA 4	**Main Storage Area:** Overland flow across the compacted gravel area to drop inlet at east end of the site. A PCC swale collects runoff adjacent to the site (on Touchdown Ave.)

(1) See Site Maps in **Appendix A** for drainage areas.

3.2 Potential Sources of Pollutants

Potential pollutant sources associated with each of the four Maintenance Facilities are identified in Table 4.

Table 4: Potential Pollutant Activities and Significant Materials

Maintenance Yard	Potential Pollutant Source Activity	Potential Pollutant or Significant Material
Main Yard on 21st Street	Heavy Machinery Storage	Petroleum hydrocarbons, dust, oil and grease
	Vehicle Parking and Storage (employee vehicles, trucks, construction equipment and tractors)	
	AC Pavement and Compacted Gravel Driving Areas	
	Garage Activities	
	Maintenance Materials (road materials, tires, metals, traffic lights)	Metals, dust, oil/grease and chemicals unique to the specific material
	Equipment Maintenance and Cleaning	Sediment, sand, dust, petroleum hydrocarbons, oil/grease
	Washout Racks to Sand-Oil interceptors	
	Deicing Chemicals	Associated chemicals in fluid, salt
	Salt/Sand Mix Stockpile	Sediment, dust, sand, and salt
	Paint Storage	Hydrocarbons, other VOC's
	Fertilizer and Weed Control Chemical Storage	Nitrogen, phosphorus, and associated chemicals
	Synthetic Turf Storage	PAH's, metals (Zn, Pb), and toxic chemicals
	Brine Liquid	Salt and associated chemicals
	Waste Storage and Scrap Materials	Debris, metals, dust, oil/grease and chemicals unique to the waste or scrap material

Pacific Avenue Yard	AC Pavement Vehicle Driving, Parking and Storage	Petroleum hydrocarbons, dust, oil and grease
	Maintenance Materials Storage (road signs, metal rods, traffic materials)	Metals, dust, oil/grease and chemicals unique to the specific material
	Waste Storage and Scrap Materials	Debris, metals, dust, oil/grease and chemicals unique to the waste or scrap material
	Indoor Storage of Paint and Other Chemicals	Transportation of materials during storms
Horsemen's Yard	AC Pavement Vehicle Driving and Parking	Petroleum hydrocarbons, dust, oil and grease
	Salt, Sand and Mixed Salt/Sand Stockpile	Sediment, dust, and salt
	Decomposed Granite Stockpile	Sediment
	Soil Stockpile	Soil, sediment and debris
	Brine Making Facility	Associated chemicals in fluid, salt
	Deicing Chemicals	
	Brine Liquid	
	Indoor Equipment Storage	Petroleum hydrocarbons, dust, oil and grease
	Containment Area for Sweepers and Vactor Discharge (to Sand-Oil Interceptors)	Sand, oil and associated debris

Yard at Golden Eagle Park	Compacted Gravel AC Pavement Vehicle Driving and Parking	Petroleum hydrocarbons, dust, oil and grease
	Maintenance Materials Storage (artificial turf, metal rods, fencing, piping)	Metals, dust, oil/grease and chemicals unique to the specific material
	Roadway Sand Stockpile and Sandbags	Sediment, dust, and sand
	Fertilizer and Weed Control Chemical Storage	Nitrogen, phosphorus, and associated chemicals
	Synthetic Turf Storage	PAH's, metals (Zn, Pb), and toxic chemicals
	Brine Liquid	Salt and associated chemicals
	Outdoor Chemical Storage	Petroleum hydrocarbons and associated chemicals
	Waste Storage and Scrap Materials	Debris, metals, dust, oil/grease and chemicals unique to the waste or scrap material

Section 4: Stormwater Management Controls

4.1 Compliance with Other Environmental Programs

Storage of fluids collected from automobiles complies with the requirements of the Resource Conservation and Recovery Act (RCRA). Under RCRA, the CoS conducts weekly inspections of the fluid storage area to verify placarding, storage times, and the integrity of storage containers. During the RCRA inspection, leaks or spills which may impact storm water are noted and cleaned immediately. The BMPs included in this FSWP are also intended to prevent soil and groundwater contamination, which could lead to a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) enforcement action.

4.2 Existing Structural Best Management Practices (BMPs)

Existing structural BMPs for each facility are described in **Table 5**, as related to drainage area.

Table 5: Existing Structural BMPs for Each Drainage Area (see **Table 3**)

Maintenance Facility	Drainage Area [1]	Existing Structural BMPs
Main Yard	DA 1A	**Maintenance Services and Parking Area**: Drop inlets, conveyance systems, PCC swale Indoor wash area at the Maintenance Services Building has washout racks and sand-oil interceptors
	DA 1B	**Vehicle Garage and Covered Storage Area:** Drop inlets, conveyance systems, PCC swale, slotted drain at washing area
	DA 1C	**Maintenance Materials Storage Area (West Side of Site):** None
Pacific Avenue Yard	DA 2	**Main Storage Area:** Drop inlets, PCC swale
Horsemen's Yard	DA 3A	**Lower Stockpile Storage Areas:** None
	DA 3B	**Upper Stockpile Storage Areas:** Rip rap drainage channels
	DA 3C	**Paved Area South of Covered Storage**: Drop inlets
Yard at Golden Eagle Park	DA 4	**Main Storage Area:** Drop inlets

(1) See Site Maps in **Appendix A** for drainage areas.

4.3 Proposed Minimum BMPs

To the maximum extent practicable the use of source area control BMPs designed to prevent stormwater from becoming contaminated will be used at each of the four Maintenance facilities. The Maintenance and Operations Manager will ensure that all minimum BMPs are implemented. In summary, discharge of the following materials into the stormwater drainage system or watercourses should be prevented: fuel, oil (machine, hydraulic, crankcase), chemicals (acids, solvents & degreasers, corrosives, antifreeze), hazardous waste, heavy metals, nutrients, and sediments. Proposed minimum BMPs are indicated in **Table 6**, as applicable to each of the four maintenance facilities.

Table 6: Proposed Minimum BMPs for Each Maintenance Facility

	Main Yard on 21st Street	Pacific Avenue Yard	Horsemen's Yard	Yard at Golden Eagle Park
1. Good Housekeeping	X	X	X	X
2. General Buildings and Grounds Maintenance	X	X	X	X
3. Erosion Control Measures	X	X	X	X
4. Vehicle and Equipment Storage and Cleaning	X	X	X	X
5. Material Delivery, Handling, Storage and Use	X	X	X	X
6. Pavement Materials, Paving, and Sweeping Maintenance Management	X		X	
7. Stockpile Management	X		X	X
8. Spill Prevention and Control	X	X	X	X

X = Proposed Minimum BMP

1. Good Housekeeping

Good housekeeping applies to day-to-day operations and will be incorporated into all facility activities under the Maintenance and Operations Manager. Good housekeeping practices are intended to reduce the potential for discharge of pollutants to the stormwater drainage system or watercourses by promoting efficient and safe storage, use and clean-up methods of potential pollutants and significant materials. Maintenance facility floors and pavement will be swept or vacuumed to prevent tracking of materials outdoors. Mopping will be used as an alternative to hosing whenever possible and mop water will be disposed of in an oil/water separator.

Used rags and other contaminated materials will be disposed of in a safe matter. Drip pans or absorbent material will be used under stored and leaking vehicles and equipment to capture fluids, and will be disposed of properly after use. Materials such as used oil, antifreeze, solvents or asphaltic emulsion will be recycled whenever possible. Waste storage and disposal areas will

be clearly marked, kept clean, covered (if applicable), and well organized.

2. General Buildings and Grounds Maintenance

Each of the four maintenance facilities requires building and grounds maintenance, including care of bare soil areas along the perimeters or fence line of the facilities (if applicable), cleaning of parking areas and pavements, and maintenance of the stormwater drainage system. Minimization of water use, proper handling and disposal of waste collected and wash waters used during building and grounds maintenance, and immediate clean-up of spills will be enforced to protect stormwater quality.

The Maintenance and Operations Manager will ensure that wash water and sediment generated by building maintenance activities is properly disposed. Wash water will be disposed of properly, and sediment, sweepings and cleaning wastes will be disposed of as solid waste. The stormwater drainage system, including slotted drains and drop inlets, will be regularly inspected, cleaned and maintained to ensure effectiveness. This is particularly important in the fall prior to the first rains. Ensure that drains within buildings and outside storage areas do not discharge directly to the storm sewer system. If maintenance materials are no longer functional or intended for use, the Maintenance and Operations Manager shall enforce waste minimization practices and dispose of materials off-site to reduce accumulation of potential pollutant sources in the waste and storage areas of the facility.

3. Erosion Control Measures

Areas prone to soil erosion shall be protected, and the soil kept out of the storm water discharge. These areas include low gradient ditches adjacent to fence lines, or areas of bare soil above the curb that could contribute to runoff. Erosion control measures include seeding bare areas, diversion of runoff, paving traveled areas, trapping sediment, protecting inlets and preventing tracking.

4. Vehicle and Equipment Storage and Cleaning

Vehicle and equipment storage and cleaning BMPs are designed to minimize or eliminate the discharge of pollutants entering the storm drain system from storage and cleaning operations at the maintenance yards. Washing will only occur in designated areas at each site. Wash racks and sand-oil interceptors exist in the indoor washing facilities, and slotted drains are installed in the outdoor washing area. Cleaning will be limited to the designated cleaning areas away from storm drain inlets, drainage facilities, or waterways. Inspect and clean sand/oil interceptors and oil/water separators on a regular basis. Scheduled maintenance includes removal of accumulated oil and grit to maintain effective performance. Record maintenance dates of oil/water separators in order to track upkeep and to prolong the life of the device.

5. Material Handling, Storage and Use and Waste Management

Materials handling and waste management BMPs are implemented to minimize or eliminate the discharge of hazardous or non-hazardous materials to storm drains, watercourses, or drainage channels. This is applicable to the Main Yard, Horsemen's Yard and Yard at Golden Eagle Park that have delivery and outdoor storage of fuel, oil, grease; herbicides, pesticides, fertilizers, turf; salt, deicing material, and other snow control materials; soil, sand, decomposed granite, and other stockpile materials; and sealants, asphalt, concrete and other pavement maintenance materials. Designated storage areas will not be near a storm drain or watercourse, and be elevated on a pallet and covered. If applicable, indoor storage or covers will be provided for stockpiles. Covered storage will also be provided for secondary containment of hazardous materials.

The Maintenance and Operations Manager shall inspect storage areas weekly to ensure pallets and covers are effective, post proper storage instructions and Material Safety Data Sheets (MSDS) for all currently stored materials, repair and replace damaged secondary containment facilities, and remove all empty containers and packaging from site. The Maintenance Manager or other personnel will prevent or minimize handling of wastes that can be readily mobilized by contact with stormwater during a storm event, by containing all non-solid materials or wastes that can be dispersed via wind erosion during handling, by covering waste disposal containers when not in use, by cleaning all spills of materials/wastes that occur.

6. Pavement Materials, Paving, and Sweeping Maintenance Management

The CoS operates pavement maintenance (e.g. painting, resurfacing, and sealing) and street cleaning services. Therefore, provisions must be set for maintaining pavement materials and managing swept materials discharge to minimize or eliminate the discharge of on-site paving, surfacing, asphalt or concrete materials to storm drains, gutters or water courses. Paving materials tracked on to pavement vehicles should also be monitored. This includes the application of concrete, asphalt, seal coats, tack coats, slurries; the application of thermoplastic striping and pavement markers; pavement recycling operations; storage of paving equipment and the removal of existing concrete or asphalt.

The Maintenance and Operations Manager shall monitor employees to ensure that proper dump and disposal practices of sweepers are being implemented and ensure that paving equipment is parked over drip pans or absorbent material. Inlet protection devices will be inspected both before and after storm events and ensure storm water does not back up into active traffic areas.

7. Stockpile Management

Proper management of stockpiled materials, including soils, sand, gravel, decomposed granite and paving materials, can reduce or eliminate pollution of storm water from these sources. To ensure minimum exposure with stormwater, locate stockpiles away from storm water flows, drainage courses and inlets. The Maintenance and Operations Manager shall install stockpile perimeter controls such as temporary berms, dikes, silt fences, fiber rolls, sandbags or gravel bag

barriers as soon as possible after stockpiles are created. These temporary sediment transport barriers can be temporarily removed or moved to one side when materials are removed or added to the stockpile. Wind erosion and dust control measures will be applied on the surface of stockpiles, and all bagged materials (e.g. synthetic turf, sand bags, and fertilizer) will be placed on pallets and covered. If stockpiles are not to be used within 21 days, temporary covers (e.g. hydromulch, plastic covers) shall be installed as soon as possible. The Maintenance and Operations Manager shall take precautionary measures before a rain or high wind event and apply storm specific control measures on the surface and at the perimeters of the stockpiles.

8. Spill Prevention and Control

Discharges of non-hazardous and hazardous materials to the storm drain system will be minimized or eliminated by preventing and controlling spills through defined procedures and practices any time chemicals are used. Chemicals include (but are not limited to) soil stabilizers, dust palliatives, herbicides, growth inhibitors, fertilizers, deicing chemicals, fuels, paints, solvents, cement, lubricants, and other petroleum distillates. Chemical storage and handling areas will remain away from storm drains, and will not be stored where they are susceptible to rain (i.e. stored indoors whenever possible). Secondary containment will be used whenever possible. Always use a secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids. Used fluids will be promptly transferred to the proper waste or recycling drums.

The Maintenance and Operations Manager shall ensure that an adequate supply of spill control cleanup materials are located close to storage, fueling, and unloading areas; inspect containment structures in fueling and storage areas, update spill prevention plans when the types of chemicals stored on site changes, regularly inspect on-site vehicles and equipment for leaks, and repair them immediately.

If a spill occurs, the Maintenance and Operations Manager or other personnel on site will contact the proper authorities listed in their Emergency Notification Procedures. Without burying or washing the spill with water, they will start to contain the spill immediately. If a spill occurs during rainfall events, cover the spill as long as cleanup efforts are not compromised. All spills will be reported to City of Sparks Environmental Control Section Hotline at 775-691-9227.

4.4 Facility Specific Recommendations

The following site specific recommendations are made based on site inventories conducted May 30, 2013.

Facilities with Maintenance Material Storage (Main Yard on 21st Street, Pacific Avenue, Yard at Golden Eagle Park):

For maintenance materials that are no longer functional or intended for use (e.g. traffic lights, scrap metal, old tires, road signs), the Maintenance and Operations Manager shall enforce waste minimization practices and dispose of materials off-site to reduce accumulation of potential pollutant sources in the waste and storage areas of the facility.

Facilities with Stockpiles (Main Yard on 21st Street, Horsemen's Yard, Yard at Golden Eagle Park):

Stockpiles consisting of sediment, soil or materials with the potential to be mobilized by stormwater shall be covered or have berms constructed around them to eliminate runoff from entering the stockpile's designated storage area.

Facilities with Outdoor Materials Handling and Storage (Main Yard on 21st, Horsemen's Yard, Yard at Golden Eagle Park):

Materials stored outdoors, including sandbags, fertilizers, and synthetic turf, shall be properly secured. The Maintenance and Operations Manager shall verify that pallets, covers and other good housekeeping BMPs are utilized for storage of potential sources of pollutants. Previously opened or torn bags of materials should have a secondary containment or be stored away from stormwater.

Section 5: Inspections and Compliance

5.1 Facility Inspection Schedule

The objective of the inspections is to identify areas contributing pollutants to stormwater discharge and non-stormwater discharge associated with facility activities and to evaluate whether the BMPs are adequate and properly implemented or whether additional control measures are needed. The Maintenance and Operations Manager or other personnel will perform **quarterly visual inspections** of all storm drainage areas and inspect during at least one significant storm event. The visual inspection shall include any observations of color, odor, turbidity, floating solids, foam, oil sheen, or other obvious indicators of stormwater pollution. An inspection guidance form is provided in **Appendix B** (See **Form A**). **Form B** is specific to storm event visual monitoring.

The Maintenance and Operations Manager or other personnel will conduct an **annual stormwater compliance inspection** as supporting documentation under the Truckee Meadows MS4 permit. The inspection will determine if the BMPs have been implemented and will assess their effectiveness. The inspection will also determine if site operations have changed since development of this FSWP. If operational changes have changed since the development of this FSWP, the Maintenance and Operations Manager will determine if those changes will impact

storm water quality and develop new BMPs to address the change. An annual inspection log (**Form C**) is included in **Appendix B**.

5.2 Employee Training

The Maintenance and Operations Manager will revise the existing employee training program to include the FSWP provisions. It will be implemented to inform appropriate personnel at all levels of responsibility of the components and goals of the FSWP, including but not limited to good housekeeping practices, spill prevention and response procedures, and waste minimization practices. Training will reinforce good housekeeping and reporting, especially for the yards used less frequently. Employee's frequenting the maintenance facilities will notify management if a condition change warrants a stormwater management plan amendment.

5.3 Provisions for Amendment of the FSWP

If the facility expands, experiences any significant production increases or process modifications, or changes any significant material handling or storage practices which could impact storm water, the FSWP will be amended appropriately by the Maintenance and Operations Manager. The amended FSWP will have a description of the new activities that contribute to the increased pollutant loading and planned source control activities.

5.4 FSWP Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manages the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Andy Hummel Title: Utility Manager

Signature: _____ Date: 2-25-2014

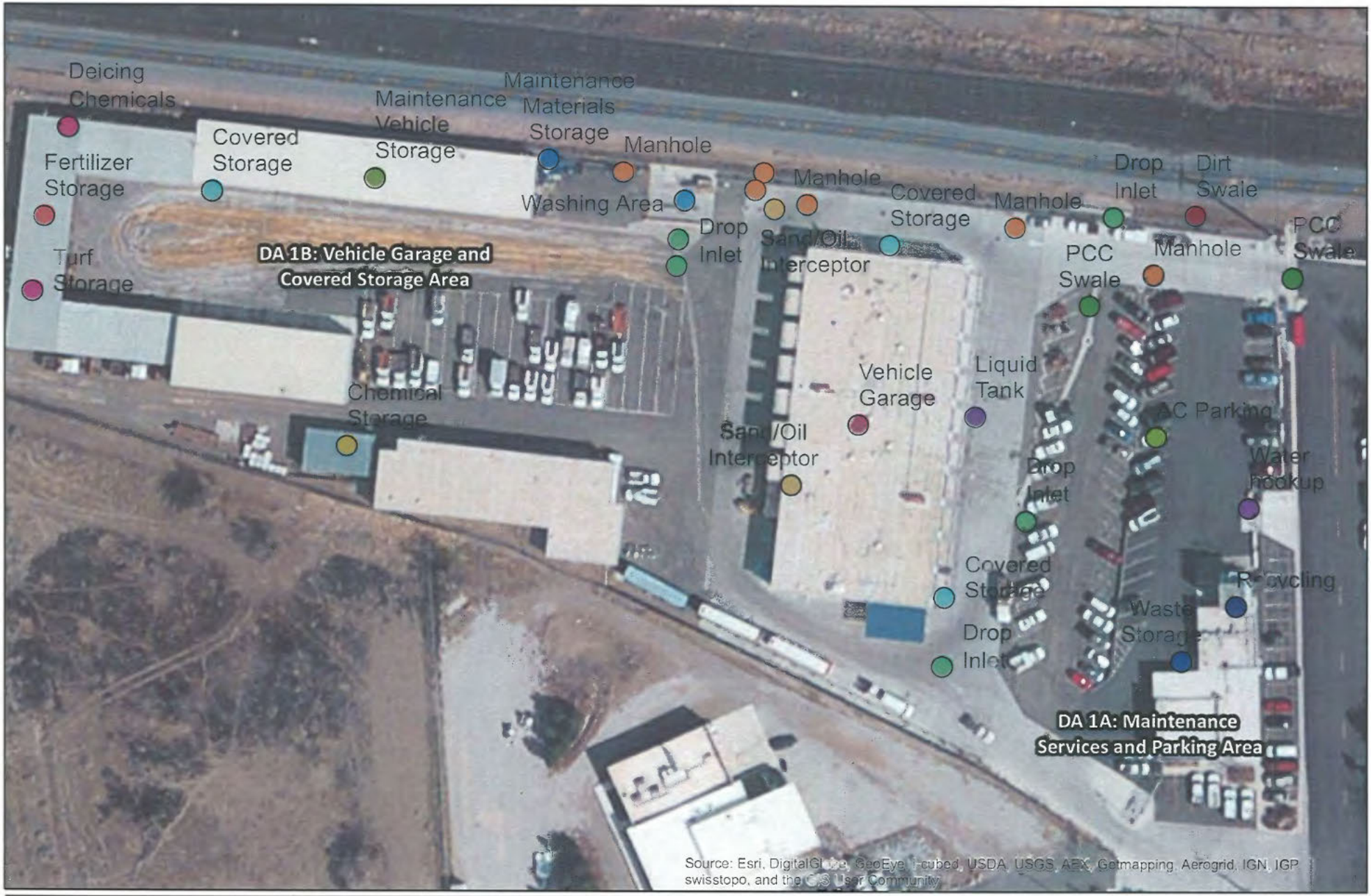
Appendix A: Site Maps

Appendix B: Inspection Forms

Form A: Quarterly Visual Inspection
Form B: Storm Event Visual Inspection
Form C: Annual Site Compliance Inspection

Appendix A

Site Maps



City of Sparks
431 Prater Way
Sparks, NV 89431

Maintenance Facility Stormwater Management Plan

Main Yard on S. 21st Street

0 45 90 Feet

N

Data Sources: GeoJot Site Visit

Date: JUNE 2013
Drawn by: KMS/NCE

Figure: 1a

NICHOLS CONSULTING ENGINEERS, Chtd.
Engineering & Environmental Services
P.O. Box 1760
Zephyr Cove, NV 89448
775.588.2505 (ph)
775.588.2607 (fax)

City of Sparks
431 Prater Way
Sparks, NV 89431

Maintenance Facility Stormwater Management Plan

Main Yard on S. 21st Street - West Yard

0 25 50 Feet

N

Data Sources: GeoJot Site Visit

Date: JUNE 2013
Drawn by: KMS/NCE

Figure: 1b

NICHOLS CONSULTING ENGINEERS, Chtd.
Engineering & Environmental Services
P.O. Box 1760
Zephyr Cove, NV 89448
775.588.2505 (ph)
775.588.2607 (fax)

City of Sparks
431 Prater Way
Sparks, NV 89431

Maintenance Facility Stormwater Management Plan

Pacific Avenue Yard

0 15 30 Feet

N

Data Sources: GeoJot Site Visit

Date: JUNE 2013
Drawn by: KMS/NCE

Figure: 2

NICHOLS CONSULTING ENGINEERS, Chtd.
Engineering & Environmental Services
P.O. Box 1760
Zephyr Cove, NV 89448
775.588.2505 (ph)
775.588.2607 (fax)

City of Sparks
431 Prater Way
Sparks, NV 89431

Maintenance Facility Stormwater Management Plan

Horsemen's Yard

0 90 180 Feet

N

Data Sources: GeoJot Site Visit

Date: JUNE 2013
Drawn by: KMS/NCE

Figure: 3

NICHOLS CONSULTING ENGINEERS, Chtd.
Engineering & Environmental Services
PO Box 1760
Zephyr Cove, NV 89448
775 588 2505 (ph)
775 588 2607 (fax)

City of Sparks
431 Prater Way
Sparks, NV 89431

Maintenance Facility Stormwater Management Plan

Yard at Golden Eagle Park

0 20 40 Feet

N

Data Sources: GeoJot Site Visit

Date: JUNE 2013, Rev. FEB 2014

Drawn by: KMS/NCE

Figure: 4

NICHOLS CONSULTING ENGINEERS, Chtd.
Engineering & Environmental Services
P.O. Box 1750
Zephyr Cove, NV 89448
775.588.2505 (ph)
775.588.2607 (fax)

Appendix B

Inspection Forms

Form A: Quarterly Visual Inspection

Date	Maintenance Facility	Drainage Area [1]	Pollutant Flow [2] (Y/N?)	If Flow is Yes, Complete This Section		
				Possible Source	Observations [3]	Corrective Actions
	Main Yard	DA 1A				
		DA 1B				
		DA 1C				
	Pacific Avenue Yard	DA 2				
	Horsemen's Yard	DA 3A				
		DA 3B				
		DA 3C				
	Yard at Golden Eagle Park	DA 4				

(1) See Site Maps in **Appendix A** for drainage areas.
(2) Evaluation shall take place during dry periods.
(3) Observations include flow, stains, sludge, color, odor, or other indications of a non-storm water discharge

Inspector's Name: _____

Form B: Storm Event Visual Inspection

Date and Time [1]	Maintenance Facility	Drainage Area [2]	Weather Conditions	Observations [3]	If contamination observed, probable source?
	Main Yard	DA 1A			
		DA 1B			
		DA 1C			
	Pacific Avenue Yard	DA 2			
	Horsemen's Yard	DA 3A			
		DA 3B			
		DA 3C			
	Yard at Golden Eagle Park	DA 4			

(1) Inspections shall be conducted within the first thirty minutes of discharge or as soon thereafter as practical, but not exceeding sixty minutes.
(2) See Site Maps in **Appendix A** for drainage areas.
(3) Observations include color, odor, turbidity, floating solids, foam, oil sheer, etc.

Inspector's Name: _____

Form C: Annual Compliance Inspection [1]

Maintenance Facility	Drainage Area [2]	Potential Pollutants and Source [3]	Changes in Conditions Since Last Inspection [4]	BMP Effective? (Y/N)	Additional Notes or Provisions
Main Yard	DA 1A				
	DA 1B				
	DA 1C				
Pacific Avenue Yard	DA 2				
Horsemen's Yard	DA 3A				
	DA 3B				
	DA 3C				
Yard at Golden Eagle Park	DA 4				

(1) Scope of this inspection is to verify that BMPs are properly operated and are adjusted if operational or site changes require new BMPs to prevent storm water contamination.
(2) See Site Maps in **Appendix A** for drainage areas.
(3) See Table 4 for Potential Pollutants and Sources at each site
(4) Changes in drainage conditions or operations require revisions to the FSWP.

Inspector's Name: _____

Date: _____

City of Sparks
Attachment 5
See Item 6.8

Sparks City Council Meeting
2:00 PM, Monday, March 24, 2014
City Council Chambers, Legislative Bldg, 745 Fourth St., Sparks

Public Meeting Notice — Meetings are open to the public and notice is given in accordance with NRS 241.020.

Posting — This agenda has been distributed for posting at the following locations three (3) working days before the meeting:

Sparks City Hall, 431 Prater Way	Alf Sorensen Community Center, 1400 Baring Blvd.
Sparks Legislative Bldg, 745 4th St.	Sparks Library, 1125 12th St.
Sparks Recreation Center, 98 Richards Way	www.cityofsparks.us

Supporting Documentation — Documentation supporting agenda items is available on the city's website at www.cityofsparks.us – City Services – Council Agenda and Minutes, and will be available for review at the Council meeting. For further information you may contact the City Clerk's office at (775) 353-2350.

Order of Agenda — Items on the agenda may be taken out of order; the City Council may combine two or more agenda items for consideration; may remove an item from the agenda or may delay discussion relating to an item on the agenda at any time per NRS 241.020 (2)(c)(6).

Public Comment — Persons desiring to address the City Council shall first provide the City Clerk with a written request to speak so they may be recognized by the presiding officer. Each person addressing the City Council shall approach the podium when called, give his/her name, and shall limit the time of their presentation to three (3) minutes per NRS 241.020(2)(c)(7). Public comment may address any agenda item or other public issue that the City Council has the authority to effectuate or exercise control over. Public comment on matters beyond the Council's scope of authority, not relevant to Council business, and that does not serve a governmental purpose, is not permitted.

Restrictions on Public Comments — All public comment remarks shall be addressed to the Council as a whole and not to any member thereof. No person, other than members of the City Council and the person having the floor shall be permitted to enter into any discussion. No questions shall be asked of the City Council except through the presiding officer.

Disruptive Conduct — Any person who disrupts a meeting to the extent that its orderly conduct is made impractical may be removed from the meeting by order of the presiding officer.

Accommodations — The meeting site is accessible to individuals with disabilities. Reasonable efforts to assist and accommodate persons with physical disabilities desiring to attend shall be made per NRS 241.020(1). Please call the City Clerk's office (775) 353-2350 at least one (1) business day before the meeting to make arrangements.

If you have questions, you may find additional information at www.cityofsparks.us or call the City Clerk's office at (775) 353-2350.

Sparks City Council Meeting 3/24/2014

Monday, March 24, 2014 2:00 PM
City Council Chambers, Legislative Bldg, 745 Fourth St., Sparks

1. Call to Order

2. Roll Call

Invocation Speaker: Brad Dyrness
Sparks Nazarene Church

Pledge of Allegiance

Comments from the Public

Approval of the Agenda – Consideration of taking items out of sequence, deleting items and adding items which require action upon a finding that an emergency exists

3. Recommendation to Approve Minutes of

3.1 Consideration and possible approval of the minutes of the regular Sparks City Council Meeting for March 10, 2014 (FOR POSSIBLE ACTION)

4. Announcements, Presentations, Recognition Items and Items of Special Interest

4.1 Proclamation of "John Ascuaga & Family Day"

4.2 Proclamation of "National Service Recognition Day"

4.3 Proclamation: "Brain Injury Awareness Month"

4.4 Tribute to City Manager Shaun Carey

5. Consent Items

5.1 Report of Claims and Bills approved for payment and appropriation transfers for the period February 20, 2014 through March 5, 2014. (FOR POSSIBLE ACTION)

5.2 Consideration and possible approval of a contract with RFI Communications & Security Systems to replace the access security system in the amount of $57,302.00 at Truckee Meadows Water Reclamation Facility (TMWRF). (FOR POSSIBLE ACTION)

5.3 Consideration and possible approval to award Farr West Engineers a contract in an amount up to $199,900.00 to provide support to the Electronic Operations and Maintenance Manual (EOMM) project for the Truckee Meadows Water Reclamation Facility (TMWRF). (FOR POSSIBLE ACTION)

6. General Business

6.1 Consideration, 1st reading and possible discussion of Bill No. 2668, an Ordinance providing for the Conducting and Holding of the 2014 Municipal Elections. (FOR POSSIBLE ACTION)

6.2 Consideration and possible approval of an Interlocal Agreement (AC-5019) between the City of Sparks and Washoe County to allow for the Conducting and Holding of the 2014 Primary and General Elections. (FOR POSSIBLE

ACTION)

6.3 Consideration and possible approval of appointment of: (A) One member of the City Council to represent the City of Sparks on the Board of Trustees of the Western Regional Water Commission, for a two-year term ending March 31, 2016; and, (B) Recommendation to the City of Reno for a joint appointment of one elected official to represent the owners of the Truckee Meadows Water Reclamation Facility on the Board of Trustees on the Western Regional Water Commission, for a two-year term ending March 31, 2016. (FOR POSSIBLE ACTION)

6.4 Consideration and possible approval of the Financial Grade Operational Audit for the Truckee Meadows Water Reclamation Facility by Ameresco, Inc. (FOR POSSIBLE ACTION)

6.5 Consideration and possible approval of the Performance Contract for Energy Cost Savings with Ameresco, Inc, for the Truckee Meadows Water Reclamation Facility, in an amount not to exceed $24,911,589.00, with the City of Sparks' share in the amount of $7,814,765.47. (FOR POSSIBLE ACTION)

6.6 Consideration and possible approval of the 15 Year On-going Services agreement with Ameresco, Inc., in the amount of $39,585.00 for Year 1 with an annual inflation rate of 2.38% thereafter. (FOR POSSIBLE ACTION)

6.7 Consideration and possible approval of the By-Product Removal Agreement with Ostara USA, LLC for an initial 15 Year period, based from the Ameresco Agreement, resulting in new revenue to Truckee Meadows Water Reclamation Facility (TMWRF) of $140,000.00 annually. (FOR POSSIBLE ACTION)

6.8 Consideration and possible direction to initiate amendments to Title 13 regarding environmental control, pretreatment, stormwater management, septage receiving, effluent, and other sections as necessary. (FOR POSSIBLE ACTION)

6.9 Consideration and possible approval of the Alf Sorensen Natatorium Renovation Project, Bid No. 13/14-015, PWP-WA-2014-098 to Frank Lepori Construction, Inc., in the amount of $721,544.00. (FOR POSSIBLE ACTION)

6.10 Consideration, discussion and possible action on the approval of an Employment Agreement between the City of Sparks and Stephen W. Driscoll for the position of City Manager. (FOR POSSIBLE ACTION)

7. Public Hearing and Action Items Unrelated to Planning and Zoning

8. Planning and Zoning Public Hearings and Action Items

9. Closed Door Sessions

10. Comments

10.1 Comments from the Public

10.2 Comments from City Council and City Manager

11. Adjournment

Truckee Meadows Storm Water Permit Coordinating Committee

City of Reno	City of Sparks	Washoe County
E. Terri Svetich, P.E., Program Coordinator	Andy Hummel, P.E.	Walter West, P.E.
William Gall, P.E.	Toby Ebens	Christian Kropf, CEM

April 4, 2014

Nevada Division of Environmental Protection
Bureau of Water Pollution Control
901 S. Stewart Street, Suite 4001
Carson City, NV 89701

Attn: Steve McGoff, P.E.

RE: Response to Audit of the Truckee Meadows' MS4 Program (2013)

Dear Mr. McGoff:

The Cities of Reno and Sparks, and Washoe County are in receipt of Nevada Division of Environmental Protections' (NDEP) December 20, 2013 report and findings for the audit of the Truckee Meadows' MS4 Program that was conducted jointly with the U.S. Environmental Protection Agency (EPA) on June 17-20, 2013.

Thank you and to supporting NDEP staff along with Environmental Protection Agency representative, David Wampler for providing a fair and comprehensive audit of the Truckee Meadows' MS4 Program. The Truckee Meadows Storm Water Committee (SWPCC) has considered the audit findings.

In response to the referenced audit, this letter will address the overall Truckee Meadows' programmatic elements, and then address the elements pertinent to each jurisdiction. Please

find the specific audit findings that were identified as "program deficiencies or potential permit violations" in bold followed by SWPCC response noted in italics.

The Annual Report should describe more clearly the progress towards achieving the goal of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP);

The Annual Report is an evolving document reflecting the implementation of the program. Identifying and quantifying the progress towards the goal of reducing the discharge of pollutants to the MEP is however very challenging. The SWPCC will reflect the progress of reducing the discharge of pollutants to the MEP in the annual report through the annual Effectiveness Assessment exercise as described in the Storm Water Management Program (SWMP), monitoring refinements and data review.

In the next annual report, estimated quantities of material removed from the MS4 as a result of with catch basin cleanings and street sweeping will be included. This material represents a variety of pollutants such as sediment, heavy metals, trash etc., that is removed by our maintenance activities.

By June 30, 2014 the SWPCC will:

- *Improve Effectiveness Assessment work plans to assist in documenting progress for all areas of the SWMP.*

- *Update the Maintenance Activity Questionnaire to include estimated quantity of material removed by catch basin cleaning and street sweeping in common unit.*

- *Conduct an evaluation of an effective means of summarizing the pollutants removed as a result of installed structural controls. Structural Controls installed in new development and redevelopment are selected and designed in response to the potential pollutants generated on that site. With the developed database of installed structural controls, an estimated reduction of pollutants may be possible.*

The Annual Report should include, as required by Part V.C.3 f and k of the Permit, a budget that includes all aspects of the stormwater program including committee costs, maintenance costs (e.g. sweeping, catch basin cleaning, etc.), and any other activities associated with the stormwater programs;

The Co-permittees noted that comment at the time the audit was conducted and have begun to identify the expenditures related to the implementation of this program.

By June 30, 2014 the SWPCC will develop a financial questionnaire to guide the identification of the expenditures and provide a standard format for reporting. It is recognized some data is readily available and some may need software changes in order to query and track expenditures. Consequently, identifying and documenting the expenditures will be an on-going effort. The results of which will be included in the annual report.

The monitoring frequency for dry and wet-weather flows must be consistent between the SAP and the SWMP.

The 2011 SWMP states that dry-weather and wet-weather monitoring will take place quarterly. However, the newly-approved SAP (December 2012) states that tributary monitoring will be done twice annually. The pages in the SWMP (6-59 through 6-61) must be revised, consistent with Part IV.L of the MS4 Permit, to reflect this new monitoring frequency.

By June 30, 2014 Pages 6-59 through 6-61 (BMP Fact Sheets: MS4-03 Monitoring –Dry Weather and MS4 04 Monitoring – Wet Weather)of the SWMP will be revised to reference the approved Sample Analysis Plan. The SAP is potentially updated on an annual basis on a frequency different than the SWMP. Given that is the case, if the SWMP reiterates the monitoring details of the SAP, there are times the two documents could be inconsistent. Therefore, the SAP will become an appendix to the SWMP and only referenced within the body of the SWMP.

The updated SWMP did not include maps from the Permittees showing the major outfalls as required by Part IV.B.1 of the Permit;

This was addressed in the approved updated SWMP. Appendix C – MS4 Permit Area Map of the approved TMSWMP addressed the requirement by Part IV.B.1 of the Permit. The co-permittees supplied NDEP with information on the outfalls located within the permit area. A map of the MS4 Permit area was included. The BMP Fact Sheet "BMP ID#: MS4-02 MS4 Mapping" identifies the existing mapping efforts as well as planned GIS based mapping. It further states that "Mapping of the permit area facilities and features is an ongoing effort. Updated maps will be made available to NDEP each permit cycle or upon request. Each agency shall be responsible for mapping the storm water facilities within the area under its purview. The maps will include storm water infrastructure for existing areas as well as areas of new and significant development and redevelopment."

By June 30, 2014, maps of the outfalls to the Truckee River within the MS4 permitted area will be provided to NDEP. The Cities of Reno and Sparks have documented and

completed the mapping of the major outfalls to the Truckee River. Washoe County has no major outfalls to the Truckee River within the MS4 permitted area.

As you have acknowledged, it is not NDEP's desire to have volumes of paper maps to put into your files. However, each jurisdiction's mapping is in a different format, datum or have different levels of accessibility. The Committee will work with NDEP to ensure the mapping can be seen and accessed in an acceptable manner to meet the terms of the permit.

Mapping of the Truckee Meadows MS4 throughout the urbanized area is on-going and the progress by each jurisdiction will be addressed in their respective sections. Mapping progress will be documented in the annual report.

By June 30, 2014, the SWMP will be revised to include a modification to BMP ID#: MS4-02 "MS4 Mapping" to include:

- *The feasibility of common digital mapping format of the MS4 major outfalls to the Truckee River and its' tributaries for the MS4 permitted area that would be usable by all the entities along with NDEP will be evaluated.*

Housekeeping practices at all three entities' corporation yards were observed to be inconsistent with established BMPs for corporation yards that are detailed in *The Truckee Meadows Industrial and Commercial Stormwater Best Management Practices Handbook*. Examples of poor housekeeping included, but were not limited to: storage of the salt/sand mixture and waste-oil drums at the Washoe County maintenance yard; equipment cleaning operations were performed in areas not designated for such activity at the City of Reno's maintenance yard; and numerous oil spills from equipment at all three maintenance facilities;

By June 30, 2014, the Committee will develop a standardized check list and inspection procedure for the corporation yards to improve consistency, documentation and understanding of the issues. The SWPCC recognize this deficiency is a regional issue, yet must be dealt with by each jurisdiction. Responses for immediate correction are contained herein within evaluation responses for each permittee.

Update the SWMP to include a description of a program to monitor and control pollutants from stormwater discharges listed in Part IV.H.1 of the Permit. Included in the list are sources that contribute significant pollutant loading to the MS4. NDEP recommends that the Committee study nurseries, landscapers, gas stations, restaurants and auto repair shops in its evaluation. Additionally, the inventory shall include sources subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and hazardous waste treatment, disposal and recovery facilities;

By June 30, 2014, the Committee will amend BMP Fact Sheet: IND-01 Commercial and Industrial Storm Water Inspections of the SWMP to include an annual review of the inventory sources subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and hazardous waste treatment, disposal and recovery facilities as listed at:
http://www.epa.gov/enviro/facts/tri/search.html

By October 1 each year, a list of the inventoried facilities and permit status will be submitted to NDEP.

The Cities of Reno and Sparks' Environmental Control issues Environmental Control Permits to all restaurants, gas stations and auto repair shops in the service territory of Reno, Sparks and Washoe County. The Permitted facilities are inspected a minimum of once a year for pretreatment as well as industrial storm water considerations.

In addition to these general responses from the SWPCC to address the Regional Program, each co-permittee has prepared specific responses included in their respective sections attached to this letter.

Again, the Truckee Meadows Storm Water Permit Coordinating Committee appreciates NDEP's efforts to provide a comprehensive and fair audit of our Storm Water Management Program.

Sincerely,

City of Reno

E. Terri Svetich, P.E.

William Gall, P.E

City of Sparks

Andrew Hummel, P.E.,

Toby Ebens

Washoe County

Walt West, P.E.,

DWAYNE SMITH FOR

Christian Kropf, CEM

City of Reno

City of Reno Response to NDEP's Program Evaluation Report

The following text provides the City of Reno's responses to identified Program Deficiencies and Potential Permit Violations.

Evaluation of the City of Reno's Corporation Yard:

The City of Reno needs to install some type of BMP on the lower part of the parking lot to prevent sediment discharges into the Truckee River from the corporation yard. BMP IDDE-03 of the 2011 SWMP discusses illicit discharges and the measures that must taken to prevent them. The BMP could initially be temporary, but a permanent BMP should be installed within three years;

This has been remedied (See Reno photos 1, 2 & 3). A permanent BMP has been installed. The lower part of the parking lot has been paved and an asphalt curb added to prohibit sheet flows from leaving the site. A curb cut has been added at the low point to allow the flow to enter basin lined with rip rap. A fiber roll has been placed at the entry point to prevent fines from entering the basin. The rock placement is permanent; the fiber rolls will be monitored and replaced when warranted.

Oil drips in the corporation yard need to be addressed. BMP IC-1 discusses the measures that can be taken to mitigate these spills; and

Drip pans are not considered a reasonable best management practice for this locale as they blow away and displace in moderate winds. Implementation of IC-1 with emphasis on regular and proper vehicle and equipment maintenance and repair is a superior BMP. Absorbent will be sprinkled on the top of all spills and then promptly swept up and disposed of properly. A standardized check list and inspection procedure with a recommended frequency should improve consistency, documentation and understanding of the issues.

Wash everything in the designated wash pad as discussed in BMP IC-4 so the wash water drains into the sump and can then be properly disposed of in the sanitary sewer.

Everything will be washed in the designated wash pad. This provision and requirement has been brought forward at the staff meetings and will be incorporated into routine training for staff.

Photo 2

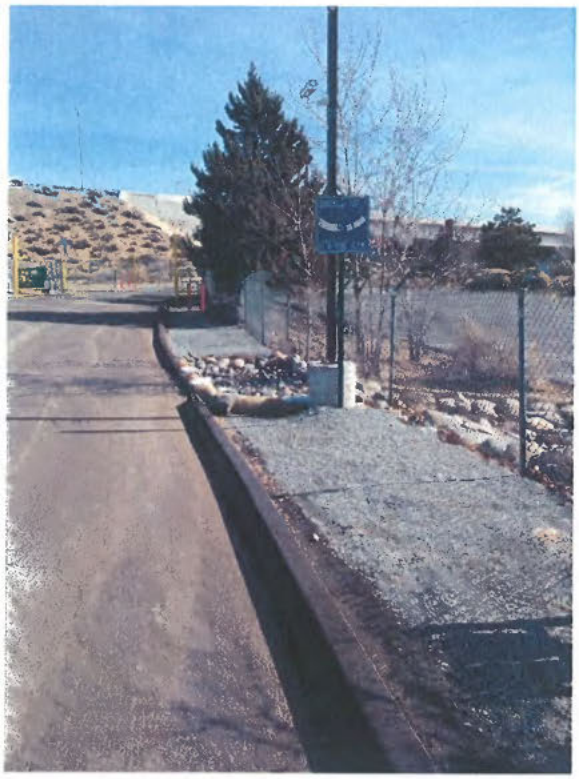


Photo 1

The Curb has been installed directing the flow to a low point where a basin has been constructed, lined with rip rap, attenuating flows and allowing sediments to settle. Fiber rolls will be maintained at the entry and exit points to further capture fines.

Other catch basins within the corporation yard are also protected with fiber rolls and will be inspected and replaced when warranted.

Photo 3

Evaluation of the City of Reno's Construction Site Inspection Program

The City of Reno and Washoe County need to improve their construction inspection programs consistent with Part IV.J.4 of the Permit, Chapter 3.6 of the SWMP and BMP CONST-01 of the 2011 SWMP;

"Prior to the recent recession, Reno had two inspectors to cover the construction stormwater inspections for the City of Reno and Washoe County. The budget cutbacks eliminated these positions. Construction basically stopped throughout the Truckee Meadows, so the need for inspections decreased and the City of Reno was able to cover any inspections with existing personnel who had construction stormwater inspections added to their new list of duties. Washoe County was also forced to cancel its inter-local inspection agreement with the City of Reno for construction site inspection support."

Please note the statements highlighted in yellow are incorrect. The City of Reno and Washoe County have never had an inter-local inspection agreement for City of Reno inspectors to conduct construction inspections within Washoe County.

The need to improve the storm water construction inspection program has been acknowledged by the City of Reno and steps have been taken or will be taken to address noted items by June 30, 2014.

- *The City of Reno Community Development Department has maintained responsibility of the inspection of private construction sites. Since the audit, storm water construction inspections have been assigned to a single individual, Jackie Schalberg. Ms. Schalberg has received training on proper selection and installation of best management practices.*
- *City of Reno inspector, Ms. Schalberg, has initiated inspecting the construction sites with a minimum frequency specified in the Reno Municipal Code, logging all inspections, verbal warnings and any other compliance issues that may arise and maintaining a record consistent with the TMSWMP BMP Fact Sheet ID#: CONST-01.*
- *By June 30, 2014, the City of Reno will integrate the inspection checklist from Appendix D of the Truckee Meadows Construction Site BMP Handbook into the City of Reno's mobile inspection database to facilitate documentation of construction site visits and recordation of all the site inspections.*

Evaluation of the City of Reno's Industrial Stormwater Inspection Program

All facilities that have a City Business License receive screening to ensure environmental oversight. New businesses are evaluated as to their applicability for a Pretreatment and/or Storm Water permit and what level of permit. The inspection evaluates the outside of the facility to ensure federal, state and local requirements are met to contain pollutants. If permitted, each facility is inspected once per year unless violations are found. If violations are found, the City goes back to ensure compliance is obtained and/or administrative actions can be taken such as re-inspection fees or fines.

The businesses meeting the criteria of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and hazardous waste treatment, disposal and recovery facilities as listed at: http://www.epa.gov/enviro/facts/tri/search.html *have been reviewed. Please see the attached for list of identified businesses for City of Reno(See City of Reno attachment1). The permit status of each business has been noted in red. Most facilities were permitted by October 1, 2013. The remainder of businesses that have not been permitted will be permitted by October 1, 2014. If the City of Reno inspectors find a facility that it believes should be covered under NDEP's Industrial Stormwater Program, NDEP will be advised the facility may need coverage under NDEP's General Permit.*

The updated SWMP did not include maps from the Permittees showing the major outfalls as required by Part IV.B.1 of the Permit;

Mapping of City of Reno's MS4 is estimated to be 60% complete. The City will be dedicating personnel for data collection of the MS4 for input into the Infrastructure Management System (IMS). The IMS will map the MS4 and associated attributes of the pipes, catch basins, drainage ways and other appurtenances. It is anticipated this effort will be complete in three years. Progress will be reported annually.

City of Sparks

City of Sparks Response to NDEP's Program Evaluation Report

The following text provides the City of Sparks' responses to identified Program Deficiencies and Potential Permit Violations.

Evaluation of the City of Sparks' Corporation Yard

The City of Sparks needs to give its employees more training in stormwater discharges, proper BMPs and good housekeeping techniques. BMP MUNI-05 in the 2011 SWMP states that periodic training will be given to Operations & Maintenance staff, but the evaluation team did not find evidence that training has been done for new employees or refresher training for experienced employees;

Refresher training was provided to Sparks maintenance employees in May of 2013 - see attached Memo listing attendees- (City of Sparks attachment 1). Training was held again January 31st, 2014 (City of Sparks attachment 2).

Additionally, Sparks Maintenance Division has developed a training plan to address refresher and new employee training (City of Sparks attachment 3). The City will seek Storm Water Management training opportunities for Sparks Public Works employees.

Oil drips in the corporation yard need to be addressed. Absorbent should be sprinkled on the top of all spills and then swept up and disposed of properly. Drip pans or other impermeable fabric should be installed under the vehicle to catch spills. Spills from quick-connect hydraulic hoses should be contained in drip pans. Sparks should be following BMP IC-1.

Drip pans are not a considered a reasonable best management practice for this locale as they blow away and displace in moderate winds. Implementation of IC-1 with emphasis on regular and proper vehicle and equipment maintenance and repair is a superior BMP. Absorbent will be sprinkled on the top of all spills and then promptly swept up and disposed of properly. A standardized check list and inspection procedure with a recommended frequency should improve consistency, documentation and understanding of the issues.

Also, On August 29, 2013 Sparks Maintenance Crews removed and disposed of the asphalt in the area of the spills noted, inspected the aggregate base below to ensure no oil had seeped through, and patched the areas of removal. Garage maintenance staff was included in both training sessions referenced above.

The FPPP was finalized February 2014 (City of Sparks attachment 4).

Evaluation of the City of Sparks' Industrial Stormwater Inspection Program

NDEP recommends that the City of Sparks' industrial inspectors increase their awareness of NDEP's industrial stormwater inspection process. Joint inspections with the City of Sparks and NDEP may also be useful to make each other aware of the other's inspection process. In particular, the City of Sparks should develop a stormwater inspection checklist which would help inspectors know what to look for during stormwater inspections, especially for large industrial sites that are covered by NDEP's Industrial Stormwater General Permit.

The City of Sparks have and will continue to issue Environmental Control Permits to all restaurants, gas stations and auto repair shops in Sparks. They are inspected a minimum of once a year and we actively enforce our storm water regulations at these industries. Currently, in Sparks we have, 249 food prep., 132 vehicle repair, 45 fueling, and 39 heavy duty vehicle repair Permits issued. These industries are not considered significant contributors of pollutants because they have been regulated for years. Additionally, we inspect / permit mobile washers in Sparks as it has been found that pollutants from the above industries can potentially be mobilized as a result of pressure washing.

Evaluation of the City of Sparks' Post-Construction Controls Program

The City of Sparks needs to remove the sediment in a timely manner from the detention basins pursuant to BMP MUNI-01 of the 2011 SWMP before the wet weather season to ensure that sufficient capacity remains in the detention basin for future storms. The estimated amount removed must also be reported in the FY 2104 Annual Report.

The accumulated sediment was a result of the severe storm events in early June of 2013. As the audit was scheduled right after the events, staff felt it would be appropriate to demonstrate to NDEP and EPA how large detention basins function at removing sediment during a storm event. All sediment has been removed, and labor / equipment usage and quantities removed were captured in our maintenance tracking system for future reporting.

The City of Sparks and Washoe County must add a section to their stormwater ordinances to address post-construction stormwater management and enforcement. Part IV.F.3.a.v of the MS4 Permit requires each Permittee to develop and implement an ordinance or other regulatory mechanism to address post-construction stormwater management from new development and significant redevelopment (NDSR) projects. Language from the City of Reno Municipal Code Section 18.12.405 could be used as a template by the City of Sparks and Washoe County.

Sparks' Title 13 has been reviewed relative to Reno Municipal Code 18.12.405. The initiation of these necessary code changes will be brought forward to the Sparks City Council for consideration March 2014 (City of Sparks attachment 5 - Council agenda for

3/24/2014item 6.8). Specific code changes needed within Title 13 are being drafted. As with any code changes, there is a public and political process that must be adhered to. The consequence of this process makes impossible to cite exactly when the code changes will be finalized, however, completion is anticipated by May 2015.

Evaluation of the City of Sparks' Construction Stormwater Inspection Program

A portion of the perimeter control adjacent to the existing Legends Shopping Center was lacking which could result in discharge from the site.

This deficiency was promptly addressed by the contractor. For further information, 33 construction site inspections have been performed at this site since the audit. One Supplemental Inspection Form was issued on 8/9/13 to correct track out, and three Notices of Violation issued (8/16/13, 11/26/13, and 12/19/13) for track out. All incidents were corrected at re-inspection.

The updated SWMP did not include maps from the Permittees showing the major outfalls as required by Part IV.B.1 of the Permit;

The City of Sparks mapping of their MS4 is essentially complete and available for viewing on their website.
http://sparks.maps.arcgis.com/home/webmap/viewer.html?webmap=d43441ca42924fa28e5188ea5dde383b

Washoe County

Washoe County Response to NDEP's Program Evaluation Report

The following text provides Washoe County's response to identified Washoe County Program Deficiencies and Potential Permit Violations. This response also provides clarification to conflicting text within the report (see section heading titled "Clarification and Correction to Statements within the Program Evaluation Report").

Evaluation of the Washoe County Corporation Yard

Housekeeping practices at all three entities' corporation yards were observed to be inconsistent with established BMPs for corporation yards that are detailed in The Truckee Meadows Industrial and Commercial Stormwater Best Management Practices Handbook. Examples of poor housekeeping included, but were not limited to: storage of the salt/sand mixture and waste-oil drums at the Washoe County maintenance yard; equipment cleaning operations were performed in areas not designated for such activity at the City of Reno's maintenance yard; and numerous oil spills from equipment at all three maintenance facilities;

Three items are identified as deficiencies and are addressed as follows:

1. *Storage of salt/sand mixture: Washoe County CSD recognizes the need to provide appropriate BMP's to prevent the transport of salt and sand offsite. CSD staff is proposing for consideration by the Board of County Commissioners a capital improvement project for the construction of a covered salt/sand storage structure for FY2015/2016 at an estimated cost of $500k. If approved, the design and construction would be planned for summer of 2015 or spring 2016.*
2. *Waste-oil drums at the Washoe County maintenance yard: at the time of the audit site visit in June 2013, Washoe County Equipment Services were temporarily utilizing uncovered waste-oil storage drums (see Photo 1). The uncovered drums have been removed and additional covered storage has been provided (see photo 2).*
3. *Oil spills from equipment: The audit identified areas where oil from hydraulic lines has dripped onto pavement (see Photo 3) and the report noted that appropriate BMP's are needed to prevent future spills. CSD Operations (Roads) has proposed retrofitting equipment with caps to be installed on hydraulic lines while in storage (see Photo 4). As with any BMP, the effectiveness of the BMP will be periodically reviewed, with revisions implemented as necessary.*

Photo 1: June 18, 2013 (photo by NDEP)

Photo 2: January 13, 2014 (new covered storage)

Photo 3: June 18, 2013 (Photo by NDEP)

Photo 4: February 25 units are in storage.

Evaluation of the Washoe County Construction Stormwater Inspection Program

The City of Reno and Washoe County need to improve their construction inspection programs consistent with Part IV.J.4 of the Permit, Chapter 3.6 of the SWMP and BMP CONST-01 of the 2011 SWMP;

Washoe County's construction stormwater inspection program has evolved over time with significant improvement over the last two years in the area of inspection reporting. The following is a brief description of Washoe County's construction stormwater inspection program process.

Permitting: Construction drawings are submitted to Washoe County and if project exceeds one acre of disturbance, the applicant is required to submit the "Construction Permit Submittal Checklist" which requires:

1. *submittal of a Notice of Intent (NOI) to obtain coverage under Nevada State General Permit NVR100000 and provide copy of NOI as part of submittal checklist.*
2. *submittal a copy of receipt or letter of authorization from NDEP*
3. *submittal copy of Performance Standards Compliance Checklist*
4. *the inclusion of standard notes on the improvement drawings.*
5. *completing the inspection fee worksheet and payment of inspection fees.*

Project Tracking: Once the Construction Permit Submittal Checklist with attachments are provided, the project is logged into Washoe County's database (currently an Excel spreadsheet) which is catalogued by fiscal year (July 1st through following June 30th). The project is then tracked until project grading is completed, stabilization is obtained and the building permit is closed.

Inspection and Reporting: The construction inspector is given the submittal package notifying him of the new construction project. The goal of the inspector is to review the project just prior to ground disturbance but after project BMP's are installed. The inspector periodically inspects the site after which a standard inspection report is prepared and is saved digitally on the County's network drive. Digital copies are provided to the contractor/ owner through email directly from the inspector's field tablet. Reports are also available upon request.

Washoe County staff has performed an internal review of the construction stormwater inspection program and have found that improvements to the permitting process would enhance tracking, inspection and closeout of a construction project. Staff feels the building permit workflow can be improved by establishing required stormwater inspections at key times during the construction

process. Washoe County is in the process of acquiring new building permit software which is expected to occur in the coming fiscal year. As the new permit software is implemented, Washoe County staff will revisit the development of stormwater inspection workflow improvements.

The updated SWMP did not include maps from the Permittees showing the major outfalls as required by Part IV.B.1 of the Permit;

Washoe County initiated an asset management program in year 2000 beginning with the acquisition of GPS survey data of all Washoe County assets including MS4 facilities. Asset management survey work was suspended 2009 due to the economic downturn and reduction of office staff. As the economic environment of Washoe County improves allowing additional staffing, a renewed effort to complete the asset management work will be initiated.

For the short term satisfaction of the MS4 permit requiring mapping of major outfalls, a focused work effort will be implemented to gather only major outfall locations which discharge into Waters of the U.S.. It is envisioned that this work will include an initial review of as-built drawings of developments located adjacent to Waters of U.S. to identify major stormwater outfalls which will be followed up with GPS field surveys to establish coordinate data and as-built outfall information (invert elevations, dimensions and type of outfall). This focused work effort will be initiated in 2014 utilizing existing County engineering, operations (Roads maintenance), and survey personnel. Given the reduced staffing, it is estimated that this work effort will take up to two years to complete. The maps will be available to NDEP as GIS data files, MS4 digital (pdf files) or paper maps.

Evaluation of the Washoe County Post-Construction Controls Program

The City of Sparks and Washoe County must add language to their ordinances to address post-construction stormwater management and enforcement as required by Part IV.F.3.a of the MS4 Permit.

Washoe County has initiated the process to update the Ordinance No. 1223 to include post-construction language as required by the MS4 permit. The ordinance revisions are expected to be completed by May 2015.

Clarification and Correction to Statements within the Program Evaluation Report

The audit report discussed aspects of Washoe County's Truck Wash area on page 10 under "Section 2.2.1 Evaluation of Washoe County's Corporation Yard". Paragraph 3 reads

"Washoe County staff showed the evaluation team the truck wash area (see photo numbers 20 and 21 of the photo log) and said it was not yet connected to the sanitary sewer. Washoe County staff said they had plans to make the connection soon."(emphasis added). The text under Photo 21 of the Photo Log reads "Photo 21 – View looking south at the Washoe County maintenance yard at the wash rack. Water from the wash rack drains to the sanitary sewer system, but unlike all other maintenance yards, this facility did not have an oil/sand separator prior to discharge."(emphasis added).

The truck wash facility is equipped with sand-oil separators and a connection to the sanitary sewer. At the time of the audit in June 2013, Washoe County had completed a retrofit project to the truck wash area which included the installation of a 620 gallon primary settling tank within each wash bay, two sand-oil separator tanks in series (1,500 gallon and 2,000 gallon) and a sanitary sewer connection. A portion of the wash water is recycled and reused, and any overflow from the sand-oil separator tanks drains to the sanitary sewer.

Attachments:

City of Reno Attachment 1 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and hazardous waste treatment, disposal and recovery facilities as listed at: http://www.epa.gov/enviro/facts/tri/search.html for City of Reno

City of Sparks - Attachment 1- Memo listing attendees

City of Sparks - Attachment 2 attendees list for second training

City of Sparks - Attachment 3 a training plan for employees

City of Sparks - Attachment 4- Completed Facility Pollution Prevention Plan (FPPP)

City of Sparks - Attachment 5- Council agenda for 3/24/2014

ndep
NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
protecting the future for generations

STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

December 20, 2013

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Walt West, P.E.
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RE: NDEP's Audit of the Truckee Meadows' MS4 Program

Dear Ms. Svetich and Messrs. Hummel and West:

The Nevada Division of Environmental Protection (NDEP), with assistance from the U.S. Environmental Protection Agency (EPA), has completed its report and findings for the audit of the Truckee Meadows' MS4 Program that was performed on June 17-20, 2013. NDEP and EPA appreciate the time each of the Permittees spent with the evaluation team during the audit to answer any questions and to show us the different aspects of each stormwater program.

The attached audit report and photo log discusses the various stormwater programs that were evaluated and lists any program deficiencies and potential permit violations along with recommendations to improve the different stormwater programs. A summary of program deficiencies and potential permit violations begins on Page 20 of the audit report. The Permittees shall provide a response to NDEP **on or before April 4, 2014**, that discusses how the Permittees will address each of the program deficiencies and the potential permit violations along with a schedule of compliance, if necessary.

If you have questions about this letter, I can be reached at 775-687-9429.

Sincerely,

Steve McGoff, P.E.
Professional Engineer
Technical, Compliance and Enforcement Branch
Bureau of Water Pollution Control

Attachments

CC: Al Tinney, P.E., NDEP (w/o copy of report)
Joe Maez, P.E., NDEP (w/o copy of report)
David Wampler, EPA, Region IX (w/ copy of report)
Andrew Clinger, Manager - City of Reno (w/ copy of report)
David Humke, Chairman, Washoe County Board of County Commissioners, 1001 E. 9th Street, Bldg. A, Reno, NV 89512 (w/ copy of report)
Shaun Carey, City of Sparks Manager, 431 Prater Way, Sparks, NV 89431 (w/ copy of report)

Program Evaluation Report
Truckee Meadows Regional Stormwater Program
(NPDES Permit No. NVS000001)

Executive Summary

The Nevada Division of Environmental Protection (NDEP), with assistance from the United States Environmental Protection Agency (EPA) Region 9, conducted a program evaluation of the Truckee Meadows Regional Stormwater Program on June 17-20, 2013. The purpose of the program evaluation was to determine whether the City of Reno, City of Sparks and Washoe County (Permittees) were in compliance with National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Discharge Permit NVS000001, and to evaluate the current implementation status of the program. During the evaluation, NDEP and EPA met with representatives of the Permittees who comprise the Truckee Meadows Storm Water Permit Coordinating Committee (SWPCC), reviewed certain programs outlined in the Storm Water Management Program (SWMP), and did separate site visits to each Permittee's facilities.

This program evaluation report discusses the different stormwater programs reviewed during the evaluation. NDEP was not able to evaluate each component of the Truckee Meadows stormwater program in depth and those areas of the stormwater program may be part of a future evaluation. Within each sub-section, where applicable, NDEP has identified noteworthy aspects of the Truckee Meadows stormwater program, recommendations for improvement, program deficiencies, and potential permit violations. Potential permit violations are areas where one or more the municipalities are not fulfilling requirements of the Permit. Program deficiencies are areas of concern that may prevent successful program implementation or areas that, unless action is taken, have the potential to result in non-compliance in the future. This report also provides recommendations for improved program implementation. Although this report includes potential permit violations, it is not a formal finding of violation.

NDEP identified the many positive attributes of the Permittees' stormwater programs including the coordination and cooperation between the different members of the SWPCC, its website TMStormwater.com, its public education and outreach program and the coordination with other agencies to perform water quality monitoring efforts on the Truckee River and making the data available on the Truckee River Info Gateway (TRIG). These and other positive aspects of the Permittees' stormwater program are discussed in full detail later in this report.

The program deficiencies and potential permit violations listed in this report include:

- The Permittees' need to include more information in their Annual Report describing their progress towards achieving the goal of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP) and the estimated budget for each Permittee's full stormwater program that includes all aspects of the stormwater program including committee costs, maintenance costs (e.g. sweeping, catch basin cleaning), etc.;
- The City of Reno and Washoe County need to improve their construction inspection programs and all three Permittees need to implement Best Management Practices (BMPs) and improve housekeeping practices at their respective corporation yards; and

- All three Permittees failed to include in their SWMP a description of an industrial program to monitor and control pollutants in stormwater discharges to the MS4s from specifically-listed industrial sites.

The Truckee Meadows Permittees could improve their stormwater programs by:

- Developing Facility Pollution Prevention Plans (FPPPs), similar to the one Sparks has developed, to use at its maintenance facilities to improve stormwater discharges from those sites;
- Working with NDEP's construction stormwater inspectors to improve their construction inspection program;
- Using a standard checklist for construction sites inspections (see the Committee-approved construction site inspection checklist in Appendix D of *The Truckee Meadows Construction Site BMP Handbook*) that can be used with portable tablets; and
- Contacting other Permittees (e.g.NDOT) to see whether its maintenance staff can attend their stormwater training class.

The Permittees will have an opportunity to respond within ninety (90) days from the date of this audit report to any potential permit violations or program deficiencies outlined at the end of this report.

TABLE OF CONTENTS

1.0 Introduction

1.1 Program Evaluation Purpose

The purpose of the program evaluation was to determine the Permittees' compliance with NPDES Permit No. NVS000001 and to evaluate the current implementation status of the program. Secondary goals included the following:

- Evaluate the adequacy of the Truckee Meadows SWMP document as a guide for program implementation;
- Identify and document positive elements of the program that could benefit other Phase I and Phase II municipalities; and
- Acquire data to assist in reissuance of the MS4 Permit.

40 CFR 122.41(i) and Part IV.A.1 of the current NPDES permit provide the authority to conduct the program evaluation.

The Truckee Meadows Stormwater Permit Coordinating Committee (TMSWPCC or Committee) serves as the program steering committee, providing overall program coordination and guidance to the three Permittees—the cities of Reno and Sparks and Washoe County. The on-site evaluation performed on June 17-20, 2013, focused primarily on the program coordination and guidance provided by the Committee and on program implementation by the three Permittees. The adequacy of the SWMP as a guide for the overall stormwater quality program was evaluated by the regulators as part of the evaluation.

1.2 Permit History

The current NPDES permit was issued on May 26, 2010, and is scheduled to expire on May 25, 2015. This is the third NPDES permit issued to the co-permittees under the Phase I stormwater regulations. The original permit, issued in July 1990 before the Phase I regulations were finalized, was administratively extended by NDEP until the first Phase I permit was issued in January 2000. The second Phase I permit was issued on January 14, 2005.

The current permit expanded permit requirements to include the revision of the SWMP and design standards for new development and significant redevelopment projects. The revised SWMP was submitted to NDEP for its review and comments on January 17, 2012, and it was approved on March 7, 2012 (hereinafter referred to as the 2011 SWMP).

1.3 Logistics and Program Evaluation Preparation

Before initiating the June 2013 program evaluation, NDEP and EPA, reviewed available program materials to gain greater knowledge of the existing program, permit requirements, and past activities, as well as to prepare for on-site activities. The following materials were reviewed:

- Current NPDES Permit No. NVS000001
- SWMP document (dated January 2012)
- Annual Report for Fiscal Year 2012 ending June 30, 2012 (dated January 15, 2013)
- Truckee Meadows Stormwater web site
- Truckee Meadows Information Gateway (TRIG) website
- Stormwater Monitoring & Sample Analysis Plan (dated December 2012)

- Technical Memorandum #1 – Assessment of the Effects of Stormwater Runoff & Background Watershed Conditions of the 303(d) Listed Waters within the Truckee Meadows MS4 Permit Area (dated February 2013)
- Correspondence between the co-permittees and NDEP

On June 17–20, 2013, NDEP, with assistance from U.S. EPA Region 9, conducted the program evaluation. The evaluation schedule was as follows:

Monday, June 17	**Tuesday, June 18**	**Wednesday, June 19**	**Thursday, June 20**
All Parties – Program evaluation kickoff. Topics covered included: Introductions & Overview of the Truckee Meadows Stormwater Management Program; Legal Authority; Post-Construction Design; Impaired Waters & TMDLs; and Sampling & Water Quality Results.	*All Parties* – Additional topics covered included: Public Education & Outreach; Guidance Manuals; and Post-Wildfire Restoration *Reno* – Tour of its corporation yard. *Washoe County* – Municipal operations.	*Sparks* – Municipal operations. *Reno* – Municipal operations.	*All Parties* – Exit interview and presentation of preliminary findings. *Post-evaluation* – Review the evaluation notes, discuss the findings with the other regulators and complete the program evaluation report.

Throughout the first and last days, and portions of the second day, the evaluation took place as an open, recorded and publicly-noticed Committee meeting. Upon completion of the evaluation, an exit interview was held with the Committee and other interested parties from Reno, Sparks and Washoe County to discuss the preliminary findings. During the exit interview, the parties were informed that the findings were to be considered preliminary, pending further review by NDEP and EPA.

1.4 Program Areas Evaluated

Although many program areas were reviewed, some areas of the stormwater program were evaluated more closely than others. Given that, this report should not be viewed as a comprehensive review of all stormwater program elements. The following stormwater quality program areas were evaluated:

- Overview of the Truckee Meadows MS4 program management
- Legal authority
- Post-construction design
- Impaired waters & Total Maximum Daily Loads (TMDLs)
- Sampling & water quality results
- Public education & outreach
- Guidance manuals
- Post-wildfire restoration
- Construction stormwater site inspections
- Industrial stormwater program

- Catch basin cleaning & disposal and
- Street sweeping methods and waste disposal

NDEP was not able to evaluate each component of the Truckee Meadows stormwater program in depth and those areas of the stormwater program may be part of a future evaluation.

2.0 Program Evaluation Results

Evaluation results for the Committee, SWMP and each Permittee are presented in the following subsections, organized by the order in which each program area was covered during the evaluation.

This program evaluation report discusses program deficiencies, positive attributes of the programs, recommendations to improve the programs and compliance items that are a result of this evaluation. Program deficiencies are areas of concern for successful program implementation. Program deficiencies may, in some cases, represent permit violations. Positive attributes are indications of a Permittee's overall progress in implementing a multifaceted program to address stormwater discharges. The evaluation team identified only positive attributes that were innovative (i.e., beyond minimum requirements). Some areas were found to be simply adequate; that is, not particularly deficient or innovative.

As indicated in Section 1.0, the evaluation team did not evaluate all components of each Permittee's program. Therefore, the Permittees should not consider the enclosed list of program deficiencies, or the program evaluation report itself, as a comprehensive evaluation of individual program elements.

The evaluation team reviewed the current stormwater controls and practices of each Permittee against the NPDES Permit, the 2011 Stormwater Management Plan (SWMP), federal and state stormwater requirements, and commonly accepted stormwater practices in other Phase I MS4 programs.

The most significant program deficiencies, potential permit violations, program recommendations and positive attributes identified during the evaluation have been briefly discussed in the Executive Summary and are discussed in more detail below.

2.1 Overview of the Truckee Meadows Stormwater Management Program

At the beginning of the evaluation, staff and managers from each Permittee discussed their overall program and answered questions from the evaluation team about their specific programs.

There is an inter-local agreement between the Permittees that covers specific aspects of the Stormwater Management Program (SWMP, Appendix B). It was amended in June 2004 when NDOT withdrew as one of the Permittees covered in the Truckee Meadows MS4 Permit. The agreement outlines the role of the Coordinating Committee, and the duties and responsibilities of the three co-Permittees including how the program costs will be shared and the liability each Permittee has if non-compliance with NPDES permit requirements is identified.

2.1.1 Legal Authority

According to Part III of the MS4 Permit, the Permittees must have the legal authority (e.g. ordinances) to, among other things, perform inspections, require structural and non-structural BMPs and establish penalties for non-compliance with the ordinances. The permit also requires Permittees to describe how they will develop and implement an ordinance to address post-construction stormwater management for new development and significant redevelopment (see Part IV.F.3.a.v of the MS4 Permit). Technical Memorandum No. 1 in Appendix E of the SWMP lists each of the Permittees' ordinances that deal directly with different parts of the permit requirements.

Evaluation Discussion: The Permittees must have authority through ordinances and codes to prohibit illicit discharges and illicit connections to the MS4 and to perform inspections. The Cities of Reno and Sparks environmental staffs are on-call 24-hours/day, 7-days/week to handle calls regarding spills and emergencies. There is an inter-local agreement between the City of Reno and Washoe County, which provides authority to the City of Reno to provide services to Washoe County for industrial and pre-treatment inspections within Washoe County's jurisdiction (excluding the City of Reno and the City of Sparks). The City of Reno has a staff of seven in its Environmental Services program and the City of Sparks has a staff of four in its Environmental Department.

Both cities have the authority to issue citations, assess fines, and suspend or revoke a business license depending upon the seriousness of the violation. The Permittees told the evaluators that stormwater enforcement actions resulting in fines are rare since the violators realize that compliance with the permit is preferable to fines. There are many applications for business licenses and the environmental staff is able to determine at the time of the application submittal whether the business needs to be part of the pre-treatment or industrial stormwater program. Inspections at construction sites and industrial facilities are discussed in more detail later in this report.

Overall, NDEP found that the Permittees have the basic legal authority to enforce the key provisions of the MS4 Permit. Each Permittee has escalation language in its ordinances and codes and the ability to fine permit violators, if necessary. The City of Sparks and Washoe County, however, must address the potential permit violation identified in its post-construction stormwater ordinances. Lastly, NDEP recommends all Permittees make the minor modifications to the ordinances that have been outlined in the footnotes on Page E-6 of Appendix E of the SWMP.

Following are the evaluation team's findings concerning the legal authority of the three Permittees:

Potential Permit Violation:

- *The City of Sparks and Washoe County must add a section to their stormwater ordinances to address post-construction stormwater management and enforcement.* Part IV.F.3.a.v of the MS4 Permit requires each Permittee to develop and implement an ordinance or other regulatory mechanism to address post-construction stormwater management from new development and significant redevelopment (NDSR) projects. Language from the City of Reno Municipal Code Section 18.12.405 could be used as a template by the City of Sparks and Washoe County.

Recommendation:

- *Language in some ordinances needs to be updated.* Technical Memorandum No. 1 in Appendix E of the SWMP lists changes on Page E-6 that should be made to the ordinances to make them consistent with the language in the permit. In particular, NDEP recommends the Permittees develop a consistent fine schedule throughout the Truckee Meadows for permit violations.

2.1.2 Post-Construction Design

When the new permit was issued in 2010, additional language was added to require the Permittees to develop a post-construction stormwater management program. Post-construction BMPs and design standards were developed for new development and significant redevelopment (NDSR) projects (See Part IV.F of the Permit and SWMP Chapter 3.5). Low-impact development (LID) is required to retain stormwater on-site, if possible, and let it percolate to recharge the groundwater or run the discharge through natural BMPs to improve water quality before discharging to the MS4. The Truckee Meadows MS4 had already developed guidance manuals in 2007 for structural controls and LID, so the concepts were familiar to the Permittees when the 2010 Permit was issued.

Evaluation Discussion: The City of Reno gave a presentation about LID and explained the LID project review process and what a developer needs to submit for an LID project review and approval. The City of Reno also showed the evaluation team the LID project at the McKinley Arts and Cultural Center. Washoe County said LID projects are permitted in the County, but developers don't receive development credits for the project. The City of Sparks stated that the soils in many areas of Sparks are not conducive to on-site retention, either because they are clay soils that don't permit percolation, or there are constituents in the soil that leach out and may cause unintended degradation of surface waters. Instead, they have installed proprietary structural controls, such as storm vaults or Baysavers™. There is also a concern throughout Washoe County that if water stands too long in a detention basin, there will be issues with vector control.

Deficiency Noted: Based upon the limited review performed by the evaluation team, NDEP did not find any deficiencies.

Recommendation: Continue to encourage developers throughout the Truckee Meadows to construct LID projects, where applicable.

2.1.3 Impaired Waters and Total Maximum Daily Loads (TMDLs)

The permit requires the Permittees to evaluate whether stormwater discharges from any part of the MS4 contributes directly or indirectly to the listing of a waterbody on NDEP's most current 303(d) list (i.e., impaired waterbody). If a Total Maximum Daily Load (TMDL) has been approved for any waterbody into which the Permittees discharge, the Permittees need to determine whether the approved TMDL is for a pollutant likely to be found in stormwater discharges from the Permittees' MS4. The Permittees must also determine whether the TMDL includes a pollutant wasteload allocation (WLA) or other performance requirements specifically for stormwater discharge from the Permittees' MS4.

Within the MS4 boundaries, there are currently nine different waterbodies with multiple segments listed on the most current 303(d) list that is awaiting approval by EPA. There are TMDLs on the Truckee River approved for total nitrogen, total phosphorous and total dissolved solids. There is

currently no wasteload allocation (WLA) approved for stormwater. Rather, stormwater is included in the load allocation (LA) for non-point sources.

Truckee Meadows MS4 submitted *Technical Memorandum #1 – Assessment of the Effects of Storm Water Runoff and Background Watershed Conditions of the 303(d) Listed Waters within the Truckee Meadows MS4 Permit Area* (TM) to NDEP in February 2013 for its review as part of the permit requirements.

The TM did not present any concrete solutions for stormwater impacts, but instead established baseline data and observations that will be used to guide future sampling efforts and to identify the need for targeted sampling and the BMPs that could be used in the future to mitigate any impacts due to stormwater discharges.

Evaluation Discussion: The Committee gave a presentation about the impaired waters in the Truckee Meadows and the efforts that have been made thus far to mitigate stormwater impacts on the Truckee River and its tributaries. Different federal and local agencies, along with NDEP's Bureau of Water Quality Planning and other stakeholders, are currently working jointly on a review of the water quality standards and the nutrient TMDL for the Truckee River. A TMDL revision would include a WLA for stormwater. The purpose of the review is to ensure that the water quality standards, LAs and WLAs are still appropriate. As the river is restored through different projects, it will better assimilate the nutrients. Some of the projects have been implemented downstream of the Truckee Meadows in conjunction with the Flood Project and the Nature Conservancy. Other water quality projects within the Truckee Meadows have also contributed to improving discharges to the Truckee River, including LID projects, the Reno Livestock Events Center and other river improvement projects.

Based on the limited review performed by the evaluation team, it appears that the Committee has complied with the permit requirements concerning impaired waters and the impact stormwater has on the Truckee River. The TM was the first step in the overall assessment of the impacts on the water quality in the Truckee Meadows from stormwater discharges. Developing a reliable model for a stormwater TMDL will most likely take a considerable amount of time and effort.

Deficiency Noted: Based upon the limited review performed by the evaluation team, NDEP did not find any deficiencies.

Recommendation: Continue to work with the different agencies to review/develop the water quality standards and a WLA for stormwater.

2.1.4 Sampling and Water Quality Results

Monitoring ambient and stormwater quality is an important component of any stormwater program. Using accurate and representative data, the Permittees can determine whether the current stormwater programs are effective and if there is a need to revise or add new BMPs. Truckee Meadows MS4 Permittees have been collecting water quality samples since 2003 as part of its permit requirements. Each year, on or before October 1, the Committee submits a Sample Analysis Plan (SAP) to NDEP for its review and approval that outlines the general sampling plan and approach for the coming year. The most recent SAP was approved by NDEP in December 2012.

Evaluation Discussion: The Committee discussed its current water quality sampling plan from December 2012. In 2013, the water quality sampling group will evaluate six tributaries, sample at locations on twelve tributaries, ten outfall locations on the Truckee River and try to sample 2-4 times during storm events on a designated tributary. The goal is to take water quality samples from the urban areas and try to understand the impacts of stormwater discharges from the urban areas on the Truckee River and its tributaries.

The Truckee River Coordinated Monitoring Program (CMP) was established in 2010 to identify all agencies and groups that conduct various types of monitoring activities on the Truckee River and its tributaries. The goal of the CMP was to make data sharing amongst the different groups more efficient. The CMP has developed a useful website, the Truckee River Information Gateway (TRIG) at http://truckeeriverinfo.org/, to coordinate the water quality sampling data performed in the Truckee Meadows area. The website is available to stakeholders and the public.

The SAP was developed by the Committee with input from the public. A Consensus Plan with input from various stakeholders was used to develop the sampling approach and decide which constituents that might be contained in stormwater discharges needed to be included in the sampling suite.

Based upon the limited review performed by the evaluation team, it appears that the Permittees are meeting the permit requirements concerning sampling and reporting the water quality results. The deficiency listed below needs to be corrected and will be included on the list of compliance items.

Deficiency Noted:

- *The monitoring frequency for dry and wet-weather flows must be consistent between the SAP and the SWMP.*

  The 2011 SWMP states that dry-weather and wet-weather monitoring will take place quarterly. However, the newly-approved SAP (December 2012) states that tributary monitoring will be done twice annually. The pages in the SWMP (6-59 through 6-61) must be revised, consistent with Part IV.L of the MS4 Permit, to reflect this new monitoring frequency.

2.1.5 Public Outreach and Education

Part IV.D of the Permit requires the Permittees to develop in its SWMP a public education and outreach program that reduces the discharge of pollutants to the maximum extent practicable. This permit element allows the Permittees to use different methods to educate the general population, local government officials, developers and commercial businesses about stormwater discharges, pollution contained in those discharges and methods to reduce the pollution entering the MS4. The Permittees have developed their SWMP and include a number of methods to meet this permit requirement including distributing educational material to the public while attending public outreach events; providing educational inserts to elementary school children; and training for developers, contractors, operators and other agency staff on erosion and sediment control and construction BMPs. The Public Education and Outreach Program is described in Chapter 3.1 of the 2011 SWMP.

Evaluation Discussion: The Committee discussed its public outreach and education plan in detail, including:

- The website TMStormwater.com which provides information about the Truckee Meadows stormwater program. Permittees said the number of hits is recorded and members of the Committee were disappointed that the number of hits is not larger, but they are doing their best to make the public aware of the stormwater program.
- Public events (e.g. Snapshot Day, the Reno River Festival, the Truckee River Cleanup Day, etc.) where the Committee provides information to the public about stormwater discharges. The Permittees all have Clean and Green Cleanup Days where dumpsters are provided and the public can dump waste free of charge.
- Outreach to Schools. The Committee members said a small-scale stormwater model has also been demonstrated at elementary school classrooms around the Truckee Meadows. This provides the school kids with an opportunity to see the effects of stormwater discharges into the bodies of water.
- Contractor Training. The Committee said it also provides BMP training for construction contractors twice annually and has developed a number of BMP manuals for various stormwater groups. The training and BMP manuals are for developers, contractors or other interested parties who work with BMPs for erosion and sediment control on construction sites

The Committee has put together a strong public outreach and education program. They have provided stormwater information to the general public through various types of media to raise public awareness and decrease pollution from stormwater discharges to the Truckee River. Although the Committee may be disappointed with the number of hits on the website, this number may increase as more people become aware of stormwater discharges and look for additional information.

Deficiency Noted: Based upon the limited review performed by the evaluation team, NDEP did not find any deficiencies.

2.1.6 Guidance Manuals

The MS4 Permit does not specifically require the Permittees to develop guidance manuals. However, to improve outreach to the affected communities, the Committee has developed a number of BMP manuals to inform certain groups of the public about erosion and sediment control BMPs and how to mitigate stormwater discharges from construction and industrial sites. The Committee has developed the following manuals:

- The Truckee Meadows Low-Impact Development Manual (August 2007)
- The Truckee Meadows Industrial and Commercial Stormwater Best Management Practices Handbook (February 2007)
- The Truckee Meadows Structural Controls Design Manual (April 2007)
- The Truckee Meadows Construction Site Best Management Practices Handbook (June 2008)
- Watershed Manual (2005)
- City of Reno's 2009 Public Works Design Manual
- River Restoration and Construction Site Permitting Handbook (2009)

The Committee was also instrumental in developing and publishing the *Nevada Contractors Field Guide for Construction Site Best Management Practices.* This guide is used by contractors on construction sites throughout Nevada and provides examples of BMPs that are acceptable and those that are not. This guide is also distributed to participants at the BMP training sessions in Reno and Las Vegas.

Evaluation Discussion: The Committee members stated that they receive regular feedback from construction contractors regarding the effectiveness of BMPs in the manuals. These comments have been considered and the BMPs will be changed when the construction field guide is updated this year. The Committee members also said that the Structural Controls Design Manual and the Low-Impact Development Manual will be combined into one document.

The Committee has also funded tributary assessments since 2005 and the data and photos from the assessments have provided a good baseline to determine the overall health of the tributaries. At this time, funds are no longer available to continue the assessments, though a request for proposals (RFP) may be issued in the future to continue the assessments.

The Committee has been very active during the past couple years in developing technical manuals that aid the development community in understanding stormwater requirements and recommending the proper BMPs to use on the jobsite to reduce or eliminate pollutants in stormwater discharges. Many of the manuals are being revised to reflect more current information about BMPs. NDEP expects the Permittees to continue to develop and improve BMPs through time and explain any revisions to BMPs in the Annual Report, as required by Part V.C.3.b of the Permit.

Deficiency Noted: Based upon the limited review performed by the evaluation team, NDEP did not find any deficiencies.

2.1.7 Post-Fire Restoration

Although this is not a permit requirement, the evaluation team thought this was an important issue to evaluate as there have been two major wildfires within the MS4 boundary during the past two years. The wildfires, called the Caughlin and Washoe wildfires, occurred a couple months apart in late 2011 and early 2012. They burned thousands of acres, destroyed houses and were the cause of one death. The wildfires occurred during the winter months and left the hillsides bare and subject to erosion. The local entities formed a unified command team that assembled members from many agencies and jurisdictions in order to mitigate the fire damage and prevent uncontrolled runoff of sediment into the Truckee River and its tributaries.

Evaluation Discussion: The Committee gave a presentation that discussed the Caughlin fire in November 2011 and the steps that were taken to prevent flooding in the tributaries and ditches and uncontrolled erosion from bare hillsides. The command team directed the installation of check dams in the tributaries and straw wattles on the hillsides. Reseeding was done along with the installation of willow wattles along the stream banks. The team's efforts were successful and vegetation has returned to the area.

The Washoe wildfire occurred in February 2012 and the lessons learned during the Caughlin fire made mitigating the fire damage easier and more efficient. Fortunately, there were no major sediment discharges from either fire due, in part, to the efforts of the team.

The two wildfires burned a sizeable area within the MS4 boundary and caused considerable damage. There were bare hillsides and tributaries and irrigation ditches full of debris during the winter time when most of northern Nevada's precipitation falls. The efforts by all the team members minimized discharges of sediments through reseeding and installing check dams and willow wattles. These efforts showed the commitment of the different agencies and jurisdictions to keep the tributaries and the Truckee River as clean as possible.

Deficiency Noted: Based upon the limited review performed by the evaluation team, NDEP did not find any deficiencies.

2.2 Washoe County (Refer to Photo Numbers 19 – 46 of the Photo Log)

Washoe County encompasses the eastern slopes of the Sierra Mountains in western Nevada. The County covers an area of approximately 6,600 square miles and has a population of almost 422,000. The major cities in the County are Reno, Sparks, and Incline Village at Lake Tahoe. The MS4 Permit only covers the urbanized area surrounding the cities of Reno and Sparks and does not extend into the Lake Tahoe Basin.

2.2.1 Evaluation of Washoe County's Corporation Yard

The evaluation team met with Washoe County Public Works' employees at their corporation yard to discuss their training program and tour the corporation yard. Washoe County has three supervisors for the maintenance crews and each supervisor is responsible for approximately 250 miles of roadway throughout the County. During the evaluation, Washoe County representatives stated that their maintenance crews have been reduced from 60 workers to 38 workers over the past several years. This reduction has placed a burden on the County and has shifted their maintenance program to be more reactionary. In addition, the County has some maintenance equipment that staff said were idle due to worker layoffs over the past five years.

The supervisors showed the evaluation team around the corporation yard. Washoe County has storage bins for sweeper and vactor truck waste, (see photo numbers 34 and 35 of the photo log). When the piles are dry, the material will be disposed of at the local landfill.

Washoe County staff showed the evaluation team the truck wash area (see photo numbers 20 and 21 of the photo log) and said it was not yet connected to the sanitary sewer. Washoe County staff said they had plans to make the connection soon.

Washoe County does not have a storage shed for its sand/salt mixture that is applied to icy roads (see photo number 32 of the photo log), which is inconsistent with its BMP, MUNI-03, which requires corporation or maintenance yards to implement and maintain BMPs to reduce pollutants from leaving the site.

The County has a number of sweepers to clean streets and County-owned parking lots. A couple sweepers have HEPA-filters installed and use a regenerative air system to sweep up the material (see photo numbers 37, 38 and 42 of the photo log).

The evaluation team noticed that there were many oil spots on the asphalt from disconnected hydraulic hoses (see photo numbers 33 and 36 of the photo log). When the hoses are uncoupled from the trucks, a little oil drips onto the ground unless the hoses are stored properly.

The evaluation team also saw old, oily barrels containing what appeared to be waste oil that were outside and exposed to precipitation (see photo number 39 of the photo log). Washoe County said the barrels were ready for disposal and would be removed that day.

Deficiencies Noted:

The following program deficiencies need to be addressed by Washoe County. NDEP considers these deficiencies because the specific BMPs listed in The Truckee Meadows Industrial and Commercial Stormwater Best Management Practices that are not being implemented by Washoe County at its corporation yard.

- Keep barrels containing pollutants covered or stored inside to prevent exposure to stormwater (BMP IC-1);
- Connect the truck wash discharge to the sanitary sewer (BMP IC-4);
- Construct a sand/salt storage shed when funds are available to prevent potential runoff of pollutants (BMP SC-4); and
- Put drip pans underneath any dripping hydraulic lines or leaking equipment (BMP IC-1).

2.2.2 Evaluation of Washoe County's Street Maintenance Operations

Washoe County took the evaluation team to see its street maintenance staff clean catch basins and sweep the streets. According to the Washoe County portion of the 2011-12 Annual Report, Washoe County cleaned 97 catch basins and 203,700 linear feet of ditches. The evaluation team watched the two-man crew used the vactor truck to clean numerous catch basins in one of the local developments. The crews remove the catch basin cover and then use the vacuum to suck up any soil and debris they find in the catch basin (see photo numbers 40 and 41 of the photo log). They can use water to loosen any hard-packed dirt that can be vacuumed immediately so the dirt is not washed down to the next catch basin.

The evaluation also visited a street where one of Washoe County's sweepers was working (see photo number 42 of the photo log). When the sweeper is full, it returns to the corporation yard to dump the load. Washoe County estimates that it removes an average of about 16 cubic yards of material per day. Washoe County separates its street sweeping operations into regular sweeping and winter-time sweeping. For each portion, Washoe County stated in the 2011-12 Annual Report that it swept 3,218 miles of road (regular sweeping) and 3,152 miles of winter-time sweeping. Both totals are slightly lower than they had estimated. Future year goals (FY 2013) are 4,000 miles for both regular sweeping and winter-time sweeping.

2.2.3 Evaluation of Washoe County's Construction Stormwater Inspection Program

The evaluation team met with Washoe County's sole inspector who said there are very few active construction sites in Washoe County's area of the MS4. The evaluation team traveled with the inspector to the Water Splash Park in North Valleys to see an active construction site (see photo number 43 of the photo log). The inspector is responsible for inspecting all construction projects within Washoe County, and he said he tries to visit the active construction sites at least weekly.

The inspector met with the foreman of the project and asked to see the SWPPP. The SWPPP consisted of a one-page site plan with one BMP installation marked on the map (track-out control). He walked the site with the foreman and looked at the BMPs (see photo number 44 of the photo

log). They had an angle-iron bridge that was laid at the egress from the construction site to remove sediment from the truck tires (see photo number 45 of the photo log). Despite the track-out controls, there was still track-out from the site onto the adjoining street (see photo number 46 of the photo log). The foreman explained that he uses a sweeper to clean the street at the end of the day.

There was no perimeter control around the site and the dirt piled up would be able to discharge from the site if precipitation would fall. Washoe County told the foreman that they would need to install straw wattles or silt fence along the perimeter to prevent sediment discharges from the site.

Deficiencies Noted:

The SWMP BMP CONST-01outlines the protocol the Permittees will use when they inspect construction sites for stormwater discharges. Based upon the limited review of the Washoe County construction program, NDEP found the following deficiencies in Washoe County's construction stormwater inspection program:

- The Washoe County inspector did not use the established checklist during site inspections to ensure that all areas are reviewed during the inspection and inspections from site to site throughout Washoe Counted are treated fairly. There is already a Committee-approved construction site inspection checklist in Appendix D of *The Truckee Meadows Construction Site BMP Handbook*; and
  Housekeeping practices at all three entities' corporation yards were observed to be inconsistent with established BMPs for corporation yards that are detailed in *The Truckee Meadows Industrial and Commercial Stormwater Best Management Practices Handbook.* Examples of poor housekeeping included, but were not limited to: storage of the salt/sand mixture and waste-oil drums at the Washoe County maintenance yard; equipment cleaning operations were performed in areas not designated for such activity at the City of Reno's maintenance yard; and numerous oil spills from equipment at all three maintenance facilities.
- It appears that the Washoe County inspector has not been recording all the construction site inspections on a database. The FY 2012 Annual Report listed 8 inspections that were conducted by Washoe County. This number may be low due to a lack of construction activity in Washoe County during that period, but additional details are needed to comply with the MS4 Permit and BMP CONST-01 of the 2011 SWMP.

Recommendations:

- NDEP recommends that Washoe County improve its construction site inspection program which might include performing joint inspections with NDEP's inspectors to see what they look for during a site inspection.

2.3 City of Sparks (Refer to Photo Numbers 47 – 60 of the Photo Log)

Sparks, which has a population of about 90,000 people, is the fifth-largest city in Nevada. The city is located adjacent to Reno and occupies about 36 square miles. Significant growth occurred during the late 1990s and early 2000s as many new residential and commercial developments were built. Construction stopped as a result of the housing crash and many city employees were laid off. Sparks still has a significant industrial and commercial base.

The following program elements were reviewed in the City of Sparks, with any program deficiencies and findings discussed:

2.3.1 Evaluation of the City of Sparks' Corporation Yard

The evaluation team met with the City of Sparks' Public Works managers and supervisors to discuss employee training, their operations and to do a walk-through inspection of the corporation yard.

Managers with the City of Sparks told the evaluation team that it does some training of its employees, usually when they are new-hires, but it does not do additional training after that. The training usually consists of watching a video that discusses stormwater discharges and BMPs.

Sparks has developed a draft Facility Pollution Prevention Plan (FPPP) that it will be using at its corporation yard. The FPPP is not required by the permit, but was developed by the City of Sparks to identify stormwater discharges, and recommend proper BMPs and good housekeeping for the facility. Since the facility is permitted by the City of Sparks as an industrial site, it is inspected annually. If Sparks' stormwater inspectors find areas within the corporation yard that need attention, the City of Sparks will have to address these as part of the City's inspection compliance items.

During the walk-through inspection, Stormwater Managers from the City of Sparks showed the evaluation team the corporation yard where vehicles are stored and maintained, street sweepers are emptied and vactor trucks are unloaded. The corporation yard has been graded to prevent stormwater discharges from the site. The stormwater drains to a low spot in the yard where it enters a multi-chambered storm vault in the parking lot that treats stormwater (see photo number 49 of the photo log). After the stormwater goes through the various chambers to remove oils and hydrocarbons, the treated water goes into the sanitary sewer.

The evaluation team was shown the area where spoils are dumped from vactor trucks and street sweepers (see photo number 51 of the photo log). The area is sloped so the liquid waste drains into a sump. According to the manager with the City of Sparks, when the liquid reaches a certain level, it goes through a sand/oil separator and then drains into the sanitary sewer. When the solid waste material dries, it is taken to Lockwood landfill for disposal.

The evaluation team viewed the wash pad where vehicles and equipment are cleaned (see photo number 48 of the photo log). Wash water is discharged from the pad to a sump, then through the sand/oil separator before discharging to the sanitary sewer.

Sparks does not have a sand/salt storage shed on-site. It does have an enclosure to store the brine solution. The enclosure is made from concrete barrier rail with straw wattles at the enclosure entrance to contain any spills (see photo number 52 of the photo log).

There are numerous buildings that house the various vehicles used by the maintenance crews (see photo number 50 of the photo log). Vehicles are maintained inside the buildings and the evaluation team noticed that oil and other fluids were stored inside with secondary containment.

The fueling station has a barrel containing absorbent and a spill kit adjacent to the pumps. There is a separate barrel for the disposal of used absorbent.

The evaluation team noticed that there were numerous oil drips throughout the yard (see photo number 53 of the photo log). These drips were from leaking vehicles and hydraulic lines from

plows or other equipment. This is common in most maintenance yards, but also an easily preventable practice.

Deficiencies Noted:

- The City of Sparks needs to give its employees more training in stormwater discharges, proper BMPs and good housekeeping techniques. BMP MUNI-05 in the 2011 SWMP states that periodic training will be given to Operations & Maintenance staff, but the evaluation team did not find evidence that training has been done for new employees or refresher training for experienced employees; and
- Oil drips in the corporation yard need to be addressed. Absorbent should be sprinkled on the top of all spills and then swept up and disposed of properly. Drip pans or other impermeable fabric should be installed under the vehicle to catch spills. Spills from quick-connect hydraulic hoses should be contained in drip pans. Sparks should be following BMP IC-1.

Recommendations:

- NDEP recommends that the City of Sparks use the Industrial BMP Manual to periodically train its employees in the proper use of BMPs for its corporation yard;
- NDEP recommends that the City of Sparks contact other MS4 Permittees in the region (e.g. NDOT) and inquire whether Public Works' employees can attend additional stormwater training; and
- NDEP recommends that the City of Sparks finalize the FPPP for its corporation yard.

2.3.2 Evaluation of the City of Sparks' Industrial Stormwater Inspection Program

The evaluation team visited the Bonanza Produce Distribution Warehouse with Sparks' industrial inspectors to observe how Sparks' inspectors perform one of their industrial inspections. Sparks issued a business license to Bonanza and performs annual inspections as part of their industrial program. They do not use a standard checklist, but instead used their permit to determine whether Bonanza was in compliance with the permit. The City of Sparks' inspectors stated that they typically look at the site from a pre-treatment perspective and occasionally inspect and enforce stormwater requirements. The City of Sparks' inspector indicated, however, that they typically review the industrial permit database to determine if the industrial site is covered by NDEP's Industrial Stormwater General Permit.

Recommendation:

- NDEP recommends that the City of Sparks' industrial inspectors increase their awareness of NDEP's industrial stormwater inspection process. Joint inspections with the City of Sparks and NDEP may also be useful to make each other aware of the other's inspection process. In particular, the City of Sparks should develop a stormwater inspection checklist which would help inspectors know what to look for during stormwater inspections, especially for large industrial sites that are covered by NDEP's Industrial Stormwater General Permit.

2.3.3 Evaluation of the City of Sparks' Post-Construction Controls Program

The evaluation team and the City of Sparks' employees went to see the detention basins that are post-construction controls that were constructed to convey stormwater runoff from one of the

newer developments in the Spanish Springs area. The week prior to the site visit, there was a flash flood above the development that delivered more than 3 inches of rain and hail over a six-hour time period. This storm provided an opportunity for the evaluation team to see how the system of detention basins worked to convey this large amount of runoff.

The storm runoff destroyed one of the main stormwater conveyance channels (see photo number 54 of the photo log). The channel had been lined with pillow concrete that worked well until the flows overtopped the channel in areas and washed away the silt behind the conveyance channel. Parts of the channel then collapsed.

The detention basins in the Spanish Springs development were heavily impacted by sediments from upstream erosion during the recent storm. The evaluation team viewed three separate detention basins that were located at different elevations of the development. The runoff carried a large load of sediment into the highest detention basins where most of the sediment load settled out (see photo numbers 55 and 56 of the photo log). The lower detention basins showed that very little sediment settled out indicating that most of the sediment load had settled out at the highest detention basin. The water eventually collected behind an earthen dam where it infiltrated into the ground. If water overtopped the dam, then it would have entered the North Truckee Drain and eventually the Truckee River.

Deficiency Noted:

- The City of Sparks needs to remove the sediment in a timely manner from the detention basins pursuant to BMP MUNI-01 of the 2011 SWMP before the wet weather season to ensure that sufficient capacity remains in the detention basin for future storms. The estimated amount removed must also be reported in the FY 2104 Annual Report.

Recommendation:

- The City of Sparks may want to consider installing reticulated blocks on the bottom of the detention basin to facilitate removal of sediment after a storm. The reticulated blocks are the same as those used in NDOT's detention basins along I-580.

2.3.4 Evaluation of the City of Sparks' Construction Stormwater Inspection Program

The evaluation team went to the I-Max Theater near The Legends to observe how the City of Sparks' inspector performs a construction stormwater inspection. The foreman for one of the sub-contractors on the project was there to discuss the project and show the BMPs that were in place to prevent stormwater discharges from the site. The site is flat, but it is adjacent to the Sparks Marina, so stormwater discharges from portions of the site would impact the water quality of the marina (see photo numbers 58 and 59 of the photo log).

The site had straw wattles around the perimeter of the site, except for one area where the access road ties into the already developed Legends Mall (see photo number 60 of the photo log). The SWPPP for the site was not available for review as the office where it was located was closed.
Deficiency Noted:

- A portion of the perimeter control adjacent to the existing Legends Shopping Center was lacking which could result in discharge from the site.

Recommendation:

- NDEP recommends that the City of Sparks use the checklist in Appendix D of *The Truckee Meadows Construction Site BMP Handbook* to document construction site visits and record all the site inspections.

2.4 City of Reno (Refer to Photo Numbers 1 – 18 and 61 - 85 of the Photo Log)

Reno, with a population of approximately 230,000 people, is the largest city in Washoe County and the fourth-largest city in Nevada. Significant growth occurred in Reno in the industrial, commercial, and residential sectors until the recession hit in 2007-2008. Due to the economic downturn, Reno's workforce went from 1,600 workers down to 1,000. As a result of these layoffs, the remaining workers have an increased workload.

The evaluation team met with different departments working for the city of Reno to review different programs that are part of the stormwater program. The evaluation team was able to question employees working in the field about their work. From these discussions, the evaluation team was able to determine their knowledge of the stormwater program. Following are the evaluation team's observations about the different programs that were evaluated during the field visits:

2.4.1 Evaluation of the City of Reno's Corporation Yard

Reno Public Works showed the evaluation team the corporation yard where vehicles are stored and maintained, street sweepers are emptied and vactor trucks are unloaded. The corporation yard is located adjacent to the Truckee River and only a grassy slope and a walking/bike path stand between the river and the corporation yard. There is a large, paved parking area that slopes down toward the Truckee River (see photo numbers 8 and 11 of the photo log). Along parts of the lower perimeter of the yard there is an asphalt berm to prevent runoff, while other areas have straw wattles to prevent runoff. In other areas there is no protection in place to prevent runoff into the river. The evaluation team noticed that there was evidence of recent discharges of sediment off-site, though it was uncertain whether the sediment reached the river (see photo number 12 of the photo log).

The evaluation team walked the corporation yard with the City of Reno staff and managers and saw:

- The area where spoils are dumped from vactor trucks and street sweepers (see photo number 4 of the photo log). The area is sloped so the liquid waste drains into a sump (see photo number 3 of the photo log). When the liquid level reaches a certain level, it goes through a sand/oil separator and then disposal into the sanitary sewer. When the waste material dries, it is taken to Lockwood landfill for disposal;
- A covered wash pad located adjacent to the sump where vehicles are washed and the wash water goes into the sump and then to the sanitary sewer for disposal (see photo number 2 of the photo log). The City of Reno also said that other things may be washed there also since they want to keep all the washing operations in one place. The evaluation team did notice that one employee was washing newspaper racks outside of this area;
- The area on the east end of the yard where sediment is left behind from truck tires (see photo number 11 of the photo log). The area should be swept on a weekly basis, or more frequently, to remove this sediment;

- An enclosed sand/salt storage shed on-site to store the material to keep it dry and a separate enclosure with secondary containment for brine deicer to preventing runoff into the river (see photo numbers 5 and 6 of the photo log);
- A multi-chambered storm vault in the parking lot that treats stormwater that reaches the drop inlet (see photo numbers 9 and 10 of the photo log). After the stormwater goes through the various chambers to remove oils and hydrocarbons, it goes into the sanitary sewer;
- Numerous buildings that house the various vehicles used by the maintenance crews. They are maintained inside the buildings and the evaluation team noticed that oil and other fluids were stored inside with secondary containment (see photo number 15 of the photo log);
- A fueling station with a barrel containing absorbent and a spill kit adjacent to the pumps. There is a separate barrel for the disposal of used absorbent (see photo numbers 16 and 17 of the photo log); and
- Numerous oil drips throughout the yard (see photo number 14 of the photo log). These drips were from leaking vehicles and hydraulic lines from plows or other equipment. This is common in most maintenance yards, but is preventable.

Deficiencies Noted:

- The City of Reno needs to install some type of BMP on the lower part of the parking lot to prevent sediment discharges into the Truckee River from the corporation yard. BMP IDDE-03 of the 2011 SWMP discusses illicit discharges and the measures that must taken to prevent them. The BMP could initially be temporary, but a permanent BMP should be installed within three years;
- Oil drips in the corporation yard need to be addressed. BMP IC-1 discusses the measures that can be taken to mitigate these spills; and
- Wash everything in the designated wash pad as discussed in BMP IC-4 so the wash water drains into the sump and can then be properly disposed of in the sanitary sewer.

2.4.2 Evaluation of the City of Reno's Low-Impact Development (LID) Program

Reno has taken the lead within the Truckee Meadows MS4 area for installing LID projects. These projects include tree-box filters in downtown Reno, pervious pavement and rain gardens at the McKinley Arts Project and parking lot revisions for on-site drainage at Cabela's. Reno passed a structural controls/LID ordinance in 2009 that requires developers to include LID features in post-construction projects, where feasible. There are standard design guidance worksheets that can be used to select and size LID projects to the extent possible.

The evaluation team toured the McKinley Arts Project to see first-hand the LID features that have been installed there. There are interpretive signs at different locations to inform the visitors of the LID feature. There are also QR codes on the signs that can be scanned with smartphones for additional information (see photo numbers 61, 62 and 63 of the photo log).

Reno informed the evaluation team that it has gained valuable information concerning the installation of these different LID projects. For example, the tree box filters did not have proper drainage when first installed. Cleaning the pervious concrete at the McKinley Project took some experimentation until the workers determined the proper sequence to clean the fine material from the voids in the pervious concrete.

The City of Reno has employed LID practices that are appropriate for northern Nevada. When the structural controls/LID ordinance was passed in 2009, it was during the time with very little construction. Now that the economy has improved and construction projects are underway, there should be more LID projects in the area. Reno, Sparks and Washoe County should set examples and implement LID in and around public buildings and properties to show how the designs and techniques can be successfully used. All municipalities need to continue to push the technology so it becomes more widespread in the area.

Deficiency Noted: Based upon the limited review performed by the evaluation team, NDEP did not find any deficiencies.

2.4.3 Evaluation of the City of Reno's Construction Stormwater Inspection Program

Part IV.J of the MS4 Permit requires the Permittees to inspect construction sites to ensure that structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MS4 have been installed and properly maintained. The inspectors also need to see that the sites are in compliance with local ordinances and permits.

Deficiencies Noted:

- *The City of Reno needs to improve its construction site inspection program to ensure it is in compliance with Part IV.J of the Permit.*
  Prior to the recent recession, Reno had two inspectors to cover the construction stormwater inspections for the City of Reno and Washoe County. The budget cutbacks eliminated these positions. Construction basically stopped throughout the Truckee Meadows, so the need for inspections decreased and the City of Reno was able to cover any inspections with existing personnel who had construction stormwater inspections added to their new list of duties. Washoe County was also forced to cancel its inter-local inspection agreement with the City of Reno for construction site inspection support.

  New home construction has increased during the past year so the City of Reno will need to do inspections at the new construction sites along with inspections at the existing construction sites. Based upon the limited information gathered during the evaluation, it was not clear whether the City of Reno is in compliance with the inspection frequency requirement in Part IV.J.2 of the Permit.

  The evaluation team and the City of Reno's inspectors visited the Bella Rio Subdivision where construction crews have started building new houses (see photo number 70 of the photo log). The purpose of the visit was to observe how Reno's inspectors perform a site inspection. The inspectors told the evaluation team that one inspector does the initial inspection of the site, then when the building gets off the ground, another inspector takes over the site inspection duties. The evaluation team believes this arrangement can lead to inconsistent inspections and may confuse the contractors if they receive mixed signals from the different inspectors.

  The evaluation team noted many deficiencies at the Bella Rio Subdivision. It appeared to the evaluation team that Reno's inspectors were not prepared to visit the site as they did not wear safety vests or hardhats. It also appeared that the inspectors had never visited the back of the houses where there was a steep slope with piles of dirt on the top of the slope and no BMPs

installed on the downslope to prevent potential discharges from the site (see photo numbers 64, 65 and 66 of the photo log). Even though the text in the SWPPP listed BMPs for the slope, the contractor explained that no BMPs were installed since the natural vegetation acted as a BMP. The contractor showed the evaluation team that the SWPPP map had been changed, but not the text of the SWPPP (see photo number 69 of the photo log). Reno's inspectors also need to ensure that they are following the guidelines from BMP CONST-01 in the 2011 SWMP to perform proper inspections of the construction site.

Recommendations:

- NDEP recommends that the City of Reno integrate the inspection checklist from Appendix D of *The Truckee Meadows Construction Site BMP Handbook* into the City of Reno's mobile inspection database to document construction site visits and record all the site inspections; and
- NDEP recommends that the City of Reno log all inspections and include verbal warnings as well as other compliance issues in the summary as stated in BMP CONST-01 of the 2011 SWMP.

2.4.4 Evaluation of the City of Reno's Industrial Stormwater Inspection Program

The evaluation team and the City of Reno industrial pre-treatment inspectors visited the Cemex facility at 333 Galletti Way in Reno (see photo number 71 of the photo log). This facility is covered under NDEP's Industrial Stormwater General Permit NVR050000. Cemex makes ready-mix concrete that is hauled off-site by trucks who then deliver the product to construction sites throughout the Truckee Meadows. The City of Reno side of the facility is the production location and the City of Sparks side of the facility contains the truck wash where trucks can wash out the excess material from the trucks and also wash the entire truck.

The evaluation team and inspectors toured the facility with Mr. Shane Ryan, the plant manager. He showed the inspectors the BMPs that have been installed to prevent illicit discharges from the site into the MS4. The BMPs consisted of berms to keep the material contained on-site, a sump at the low point of the facility to catch all liquids, which could then be vacuumed out, and street sweeping to sweep up sediments left on the street (see photo numbers 77 and 78 of the photo log).

Deficiencies Noted:

The evaluation team and the City of Reno's inspectors noticed many deficiencies at this facility. Most of the deficiencies apply to BMPs that need to be installed as outlined in BMP IND-03 of the 2011 SWMP. Following are the deficiencies that were found at the facility:

- *Track-out on the street between the two sides of the facility.*
  The evaluation and inspectors found street sweepers removing sediment from the street (Galletti Way) (see photo number 72 of the photo log). The facility has operations on both sides of Galletti Way, so cement powder and sediment from the sand and aggregates can be easily transported off-site and into the street;
- *Material spilling off the site onto the street.*
  Cemex has an 8-10 foot wall made of large concrete blocks that acts as a barrier to prevent sand or other material from leaving the site. The sand or rock has been stockpiled above the

height of this wall and material is spilling out onto 4th Street and onto the adjacent railroad right-of-way (see photo numbers 74, 80 and 81 of the photo log);

- *Trucks off-loading and on-loading in a non-designated area.*
  On the Sparks side of the facility, the evaluation team and inspectors noticed that trucks pulled into the parking lot adjacent to Galletti Way and off-loaded and on-loaded sand and aggregate. This is not acceptable because there are not sufficient BMPs in the area to prevent pollutants in stormwater from entering the storm system. The evaluation team found that this this operation should be done in the assigned area of the facility; and
- *Wash-out water and concrete slurry leaking through the barriers.*
  On the Sparks' side of the facility, the evaluation team and inspectors also noticed that there is water containing concrete washout slurry leaking through the barrier rails toward the entrance ramp of eastbound I-80 (see photo number 84 of the photo log).

After touring the facility, the evaluation team and inspectors met with Mr. Ryan in his office to look at the SWPPP and discuss the findings of the inspection. The City of Reno inspectors went over the findings with Mr. Ryan and told him they would be sending him a formal letter with the findings and a timetable to correct any deficiencies. The inspectors discussed the material spillage off the site into the street, the wash-out water that is leaving the site on the Sparks' side of the facility, and the track out between the two sides of the facility.

The City of Reno sent a letter to Cemex on July 15, 2013, informing them of the findings of the inspection. Cemex must provide Reno with a remediation plan within 30 days of the date of the letter that addresses its deficiencies that have been discussed above.

The evaluation team feels that the City of Reno adequately performed this industrial inspection by noting various stormwater issues at the site, as outlined in BMP IND-01 of the 2011 SWMP. The City of Reno and NDEP have had to work together to address issues at other industrial facilities and the relationship has benefitted both parties. If the City of Reno inspectors find a facility that it believes should be covered under NDEP's Industrial Stormwater Program, it will contact NDEP to let it know that the facility may need coverage under NDEP's General Permit.

3. Conclusion

3.1 Evaluation Team Findings

The evaluation team identified many positive attributes of the Permittees' stormwater programs including the coordination and cooperation between the different members of the SWPCC, its website TMStormwater.com, its public education and outreach program and the coordination with other agencies to perform water quality monitoring efforts on the Truckee River and making the data available on the Truckee River Info Gateway (TRIG).

Other areas of the stormwater program need attention. The evaluation team found that many of the BMPs in the guidance manuals and the 2011 SWMP are not being implemented, or not fully implemented. Many of the program deficiencies can be fixed through training each Permittee's maintenance crews or inspectors and personnel at industrial facilities and construction sites. Potential permit violations, in most cases, can be remedied by submitting the required information in the Annual Report, making minor changes to ordinances or codes, updating the SWMP and submitting a study of potential industrial sources of significant polluters to NDEP.

3.2 Potential Permit Violations and Program Deficiencies

The Committee shall submit a response to NDEP within ninety (90) days of receipt of this audit report addressing the following potential permit violations and program deficiencies that are listed below. Please note that the potential permit violations listed below are not formal findings of a violation. The response must discuss in detail how the Committee or individual Permittee will mitigate the potential permit violation or program deficiency. If necessary, a schedule for compliance will be included.

Program Deficiencies:

- The Annual Report should describe more clearly the progress towards achieving the goal of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP);
- The Annual Report should include, as required by Part V.C.3 f and k of the Permit, a budget that includes all aspects of the stormwater program including committee costs, maintenance costs (e.g. sweeping, catch basin cleaning, etc.), and any other activities associated with the stormwater programs;
- The SWMP needs to be revised to reflect semi-annual monitoring rather than quarterly monitoring, as shown in Table 2-4 of the SWMP;
- The City of Reno and Washoe County need to improve their construction inspection programs consistent with Part IV.J.4 of the Permit, Chapter 3.6 of the SWMP and BMP CONST-01 of the 2011 SWMP;
- Housekeeping practices at all three entities' corporation yards were observed to be inconsistent with established BMPs for corporation yards that are detailed in *The Truckee Meadows Industrial and Commercial Stormwater Best Management Practices Handbook*. Examples of poor housekeeping included, but were not limited to: storage of the salt/sand mixture and waste-oil drums at the Washoe County maintenance yard; equipment cleaning operations were performed in areas not designated for such activity at the City of Reno's maintenance yard; and numerous oil spills from equipment at all three maintenance facilities; and
- The City of Reno's corporation yard needs to have BMPs installed on the south end of its yard to prevent or reduce stormwater discharges from the site as required by Part IV.E.1.a of the Permit, Chapter 3.4.2 of the SWMP and BMP MUNI-03 of the 2011 SWMP.

Potential Permit Violations:

- The Annual Report should also include estimates of load reductions from discharges from the MS4 as required in Part V.C.3.b of the permit;
- The City of Reno needs to log construction inspections into its database as required by Part IV.J.5 of the Permit, Chapter 3.6 of the SWMP and BMP CONST-01 of the 2011 SWMP;
- The updated SWMP did not include maps from the Permittees showing the major outfalls as required by Part IV.B.1 of the Permit;
- The Committee needs to update the SWMP to include a description of a program to monitor and control pollutants from stormwater discharges listed in Part IV.H.1 of the Permit. Included in the list are sources that contribute significant pollutant

loading to the MS4. NDEP recommends that the Committee study nurseries, landscapers, gas stations, restaurants and auto repair shops in its evaluation. Additionally, the inventory shall include sources subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and hazardous waste treatment, disposal and recovery facilities; and

- The City of Sparks and Washoe County must add language to their ordinances to address post-construction stormwater management and enforcement as required by Part IV.F.3.a of the MS4 Permit.

Photo Log
Truckee Meadows MS4 Audit
June 17-20, 2013
Photos taken by Steve McGoff, NDEP and David Wampler, USEPA, Region 9

Photos taken on June 18th

City of Reno Public Works' Corporation Yard

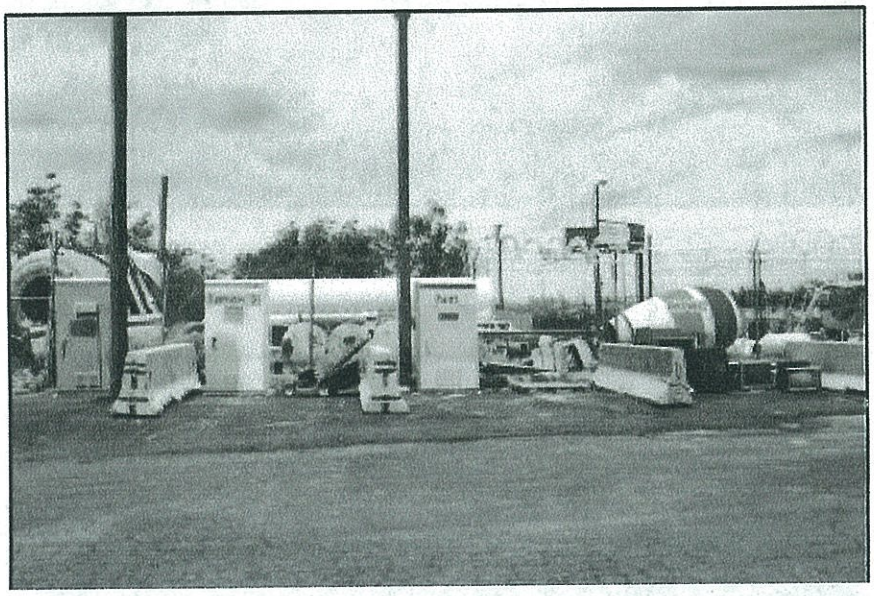

Photo 1 – This is the area in the corporation yard where different articles that are picked up off the streets are stored until disposal at the landfill. They have the areas segregated by the type of material.

Photo 2 – City of Reno Public Works' wash area for equipment and vehicles. The waste water drains to a sump before treatment in a sand/oil separator and then disposal in the sanitary sewer.

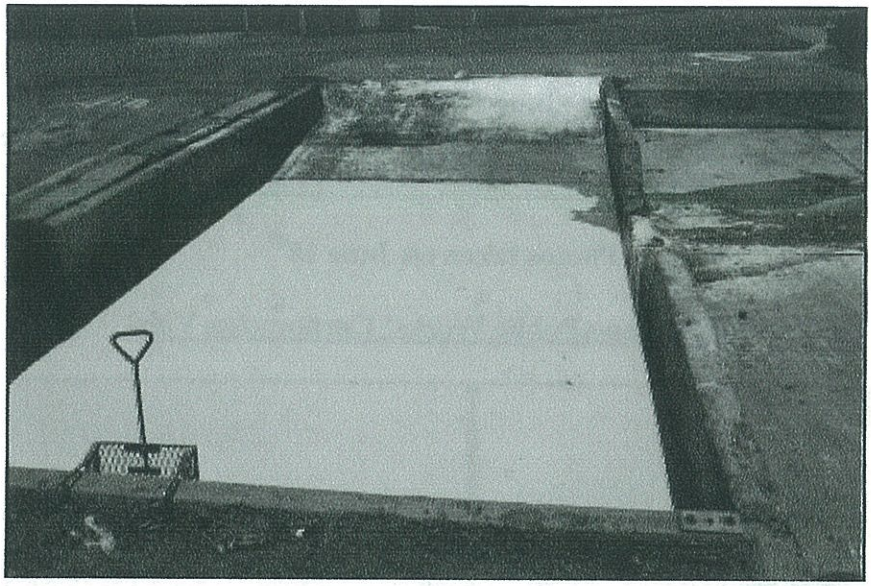

Photo 3 – This is a picture of the sump that accepts waste water from the equipment wash area and the wet street sweeper waste.

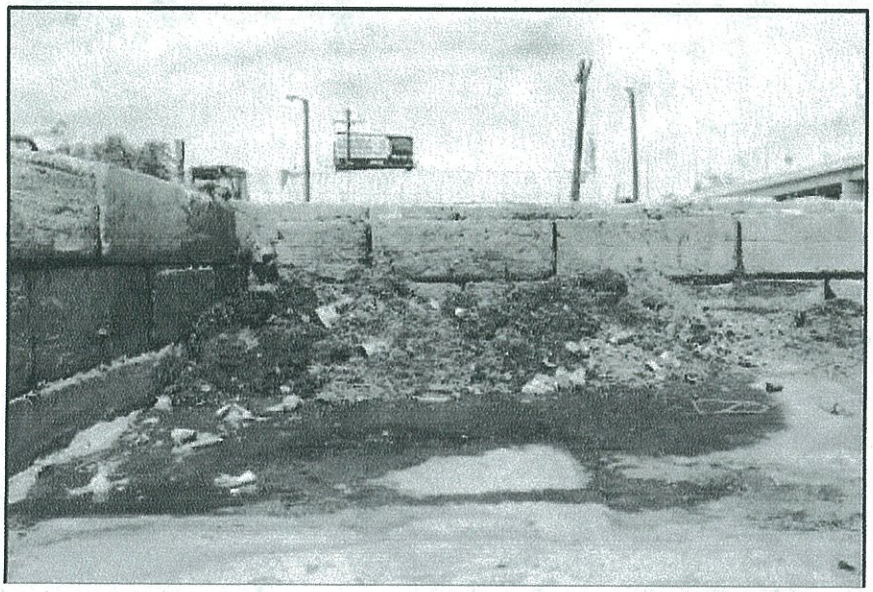

Photo 4 – Street sweeper waste that is deposited in a segregated area to let it dry before disposal. The liquid drains to the sump shown in the previous picture.

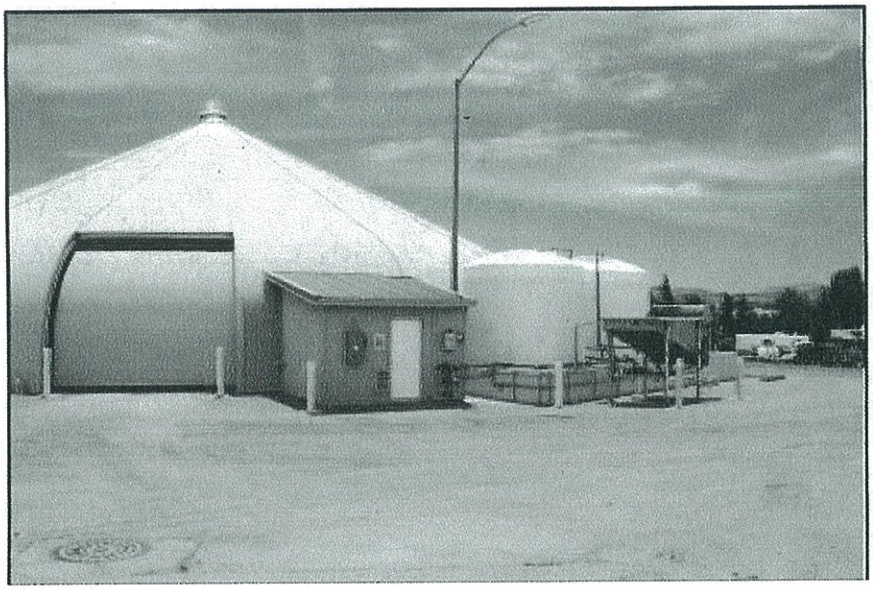

Photo 5 – This is a picture of the City of Reno's salt/sand mixture for snow removal. Containers of brine are located outside the building and are enclosed with secondary containment to prevent spills from leaving the site.

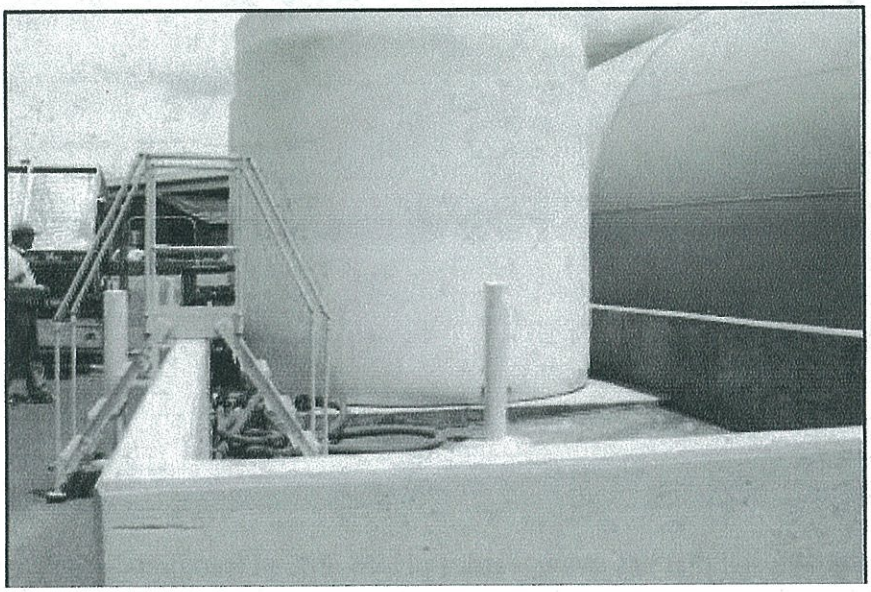

Photo 6 – This photo shows one of the brine containers that is located within an area that has secondary containment.

Photo 7 – One of Reno's sweepers emptying its contents into the designated area.

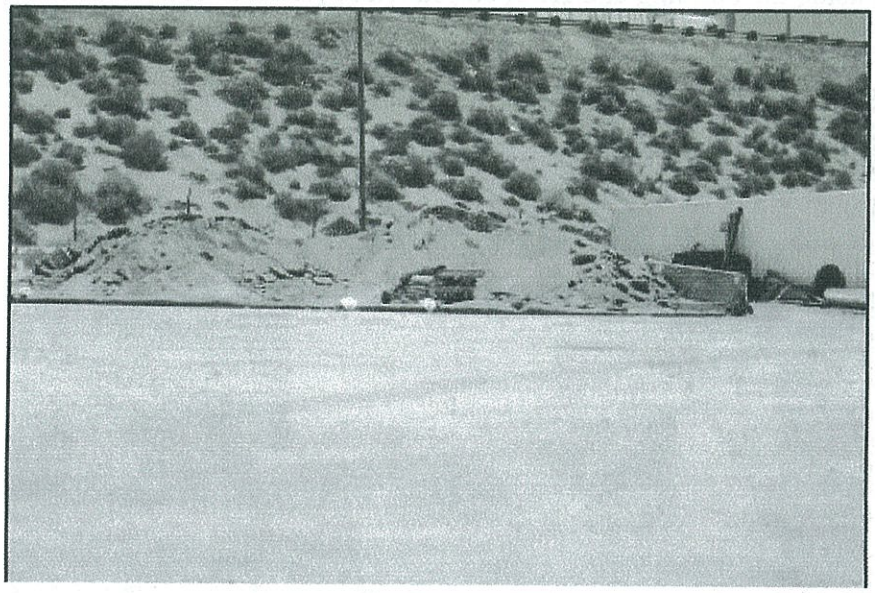

Photo 8 – Stockpiled material that has straw wattles placed around it to prevent any material from leaving the site. Notice the sand bags that have been placed at the boundary where the wattles overlap. These bags prevent the wattles from moving and prevent gaps in the perimeter made by the wattles.

Photo 9 – Main drain that collects a majority of stormwater runoff in the corporation yard. After the water enters the drain, it is treated in numerous oil/water separators before disposal in the sanitary sewer.

Photo 10 – The oil/water separators that treat any stormwater discharges.

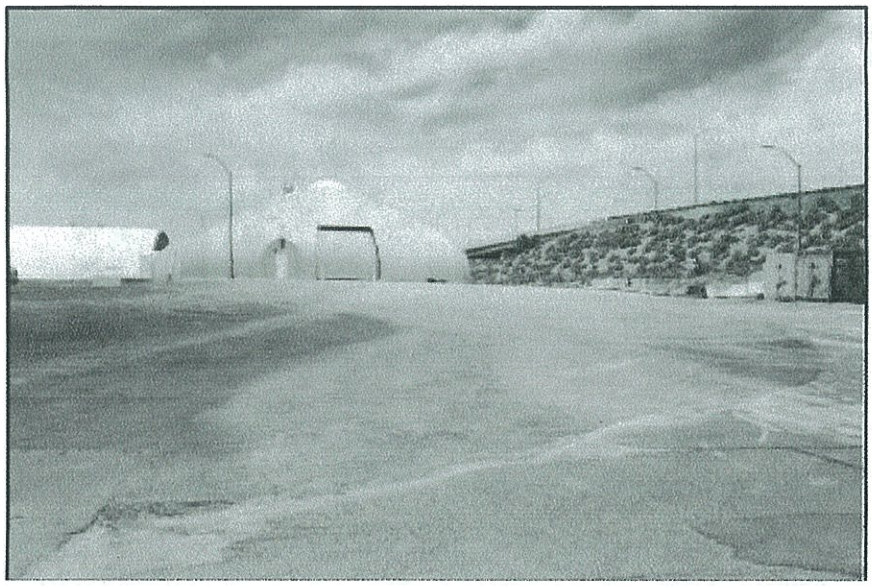

Photo 11 – Photo shows some sediment on the asphalt that could leave the corporation yard unless it is swept up.

Photo 12 – Straw wattles that have been installed along the southern end of the corporation yard to prevent pollutants from leaving the site. There was evidence that runoff had left the site and may have entered the Truckee River which is about 50 feet away.

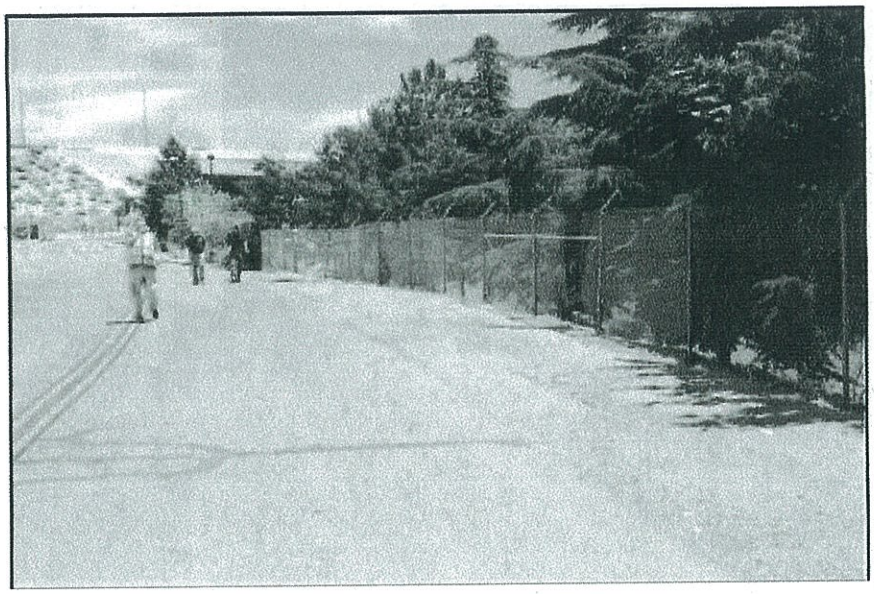

Photo 13 – This photo was taken facing east in the corporation yard. Many areas of along the fence line don't have any BMPs to prevent sediment from leaving the site. The Truckee River is located approximately 50 feet to the south.

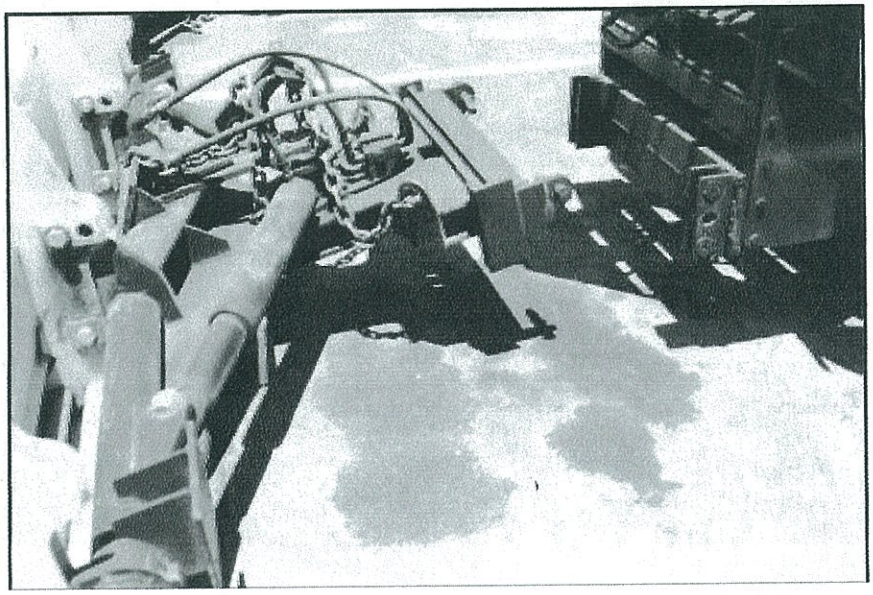

Photo 14 – Oil drips from equipment. These spills occur when the hydraulic hoses are disconnected between the truck and the equipment. Drip pans should be used to catch these drips and spills.

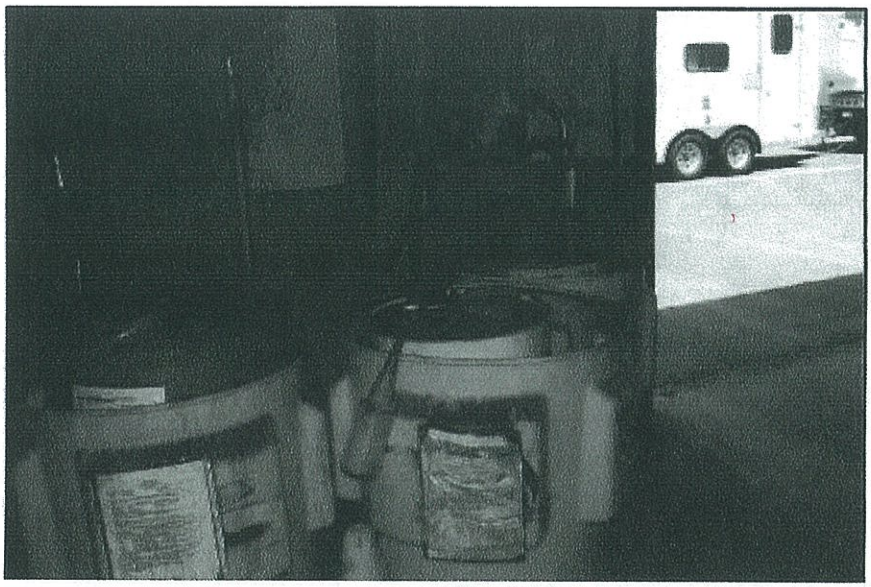

Photo 15 – Oil and lube barrels inside secondary containment. These barrels are located inside the building which prevents any precipitation contacting the pollutants and possibly discharging off-site.

Photo 16 – Truck and fueling area.

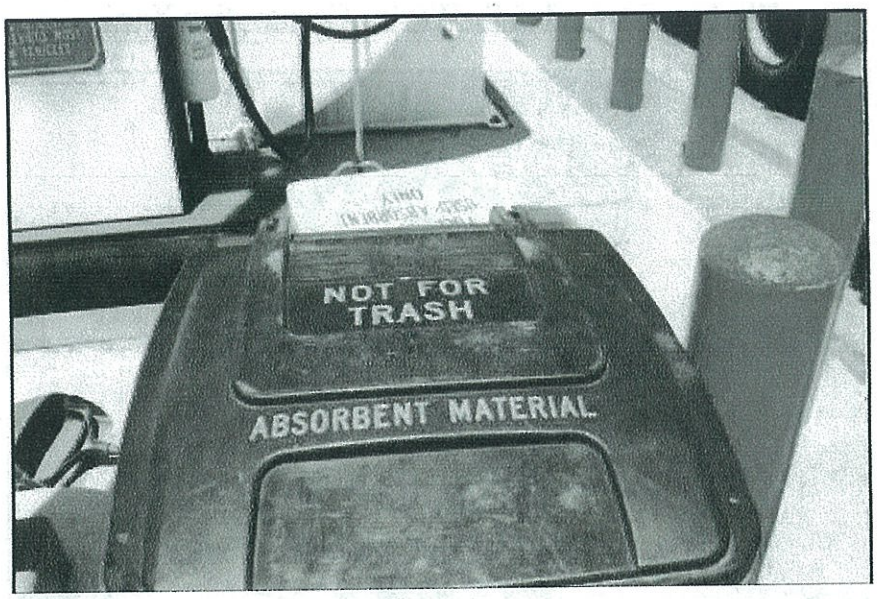

Photo 17 – Absorbent material located at the fueling area to clean up any spills. A separate barrel for used absorbent is located behind this barrel. There is also another barrel in this area that contains a spill kit for larger spills.

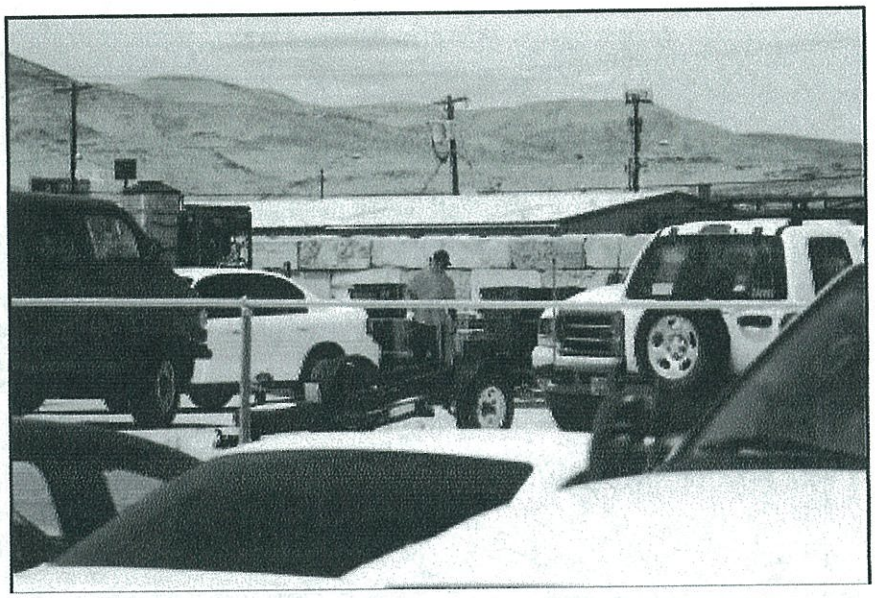

Photo 18 – The employee in this picture was cleaning some equipment which should have been done in the designated wash area.

Photo 19 – Oil sock to soak up any petroleum-based products that enter the drains at Washoe County's maintenance yard.

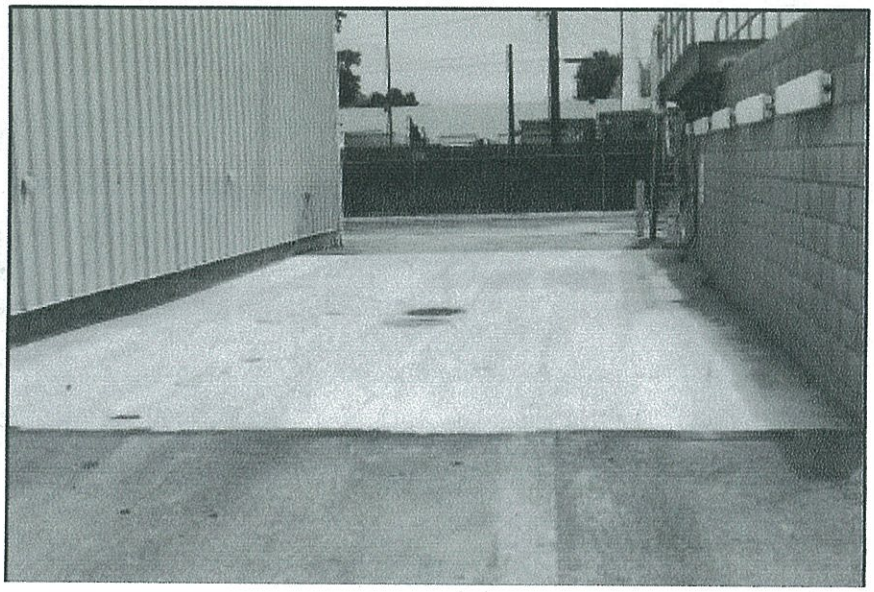

Photo 20 – Wash pad for cleaning equipment at Washoe County's maintenance yard.

Photo 21 – View looking south at the Washoe County maintenance yard at the wash rack. Water from the wash rack drains to the sanitary sewer system, but unlike all other maintenance yards, this facility did not have an oil/sand separator prior to discharge.

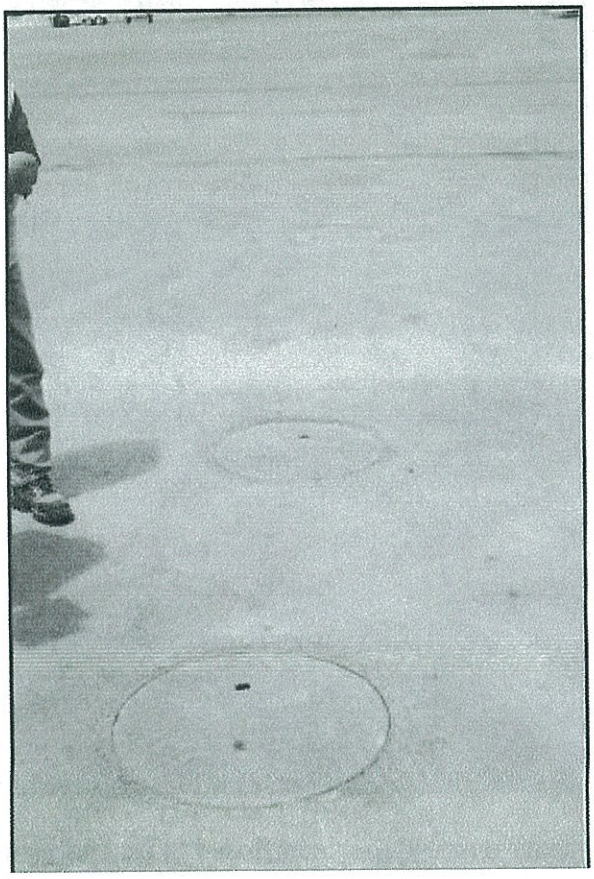

Photo 22 – Washoe County's sand/oil separator at Washoe County's maintenance yard.

Photo 23 – View of Washoe County's Maintenance Yard looking west.

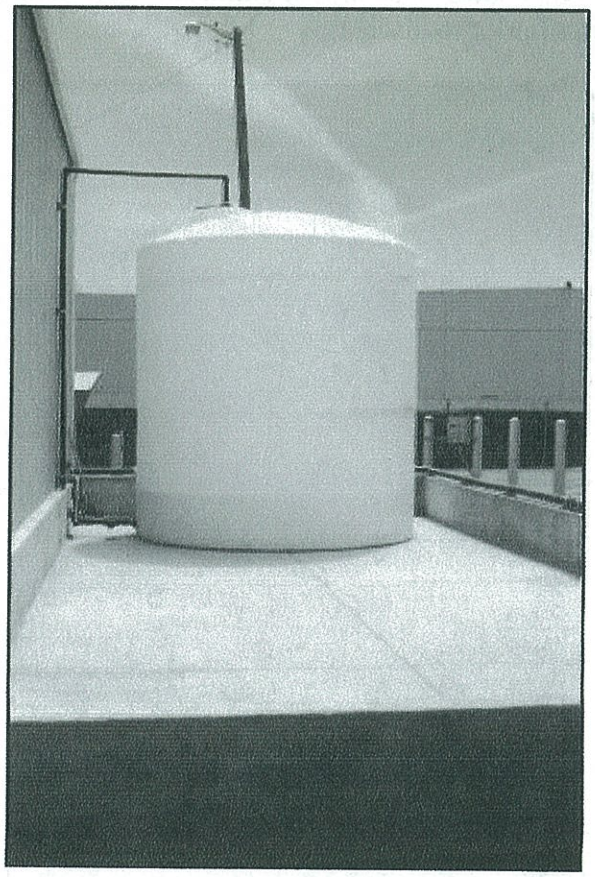

Photo 24 – Brine solution for snow removal that is enclosed in secondary storage.

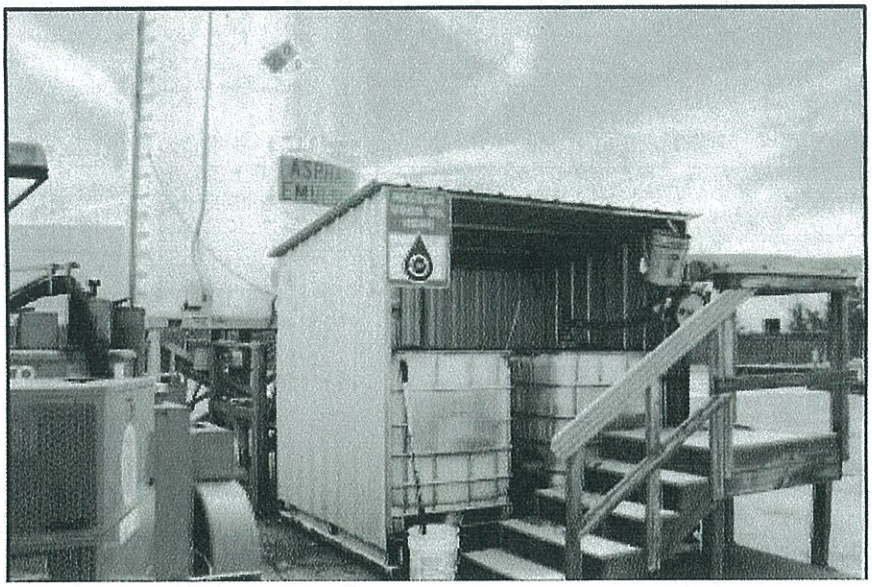

Photo 25 – Used oil recycling storage bin.

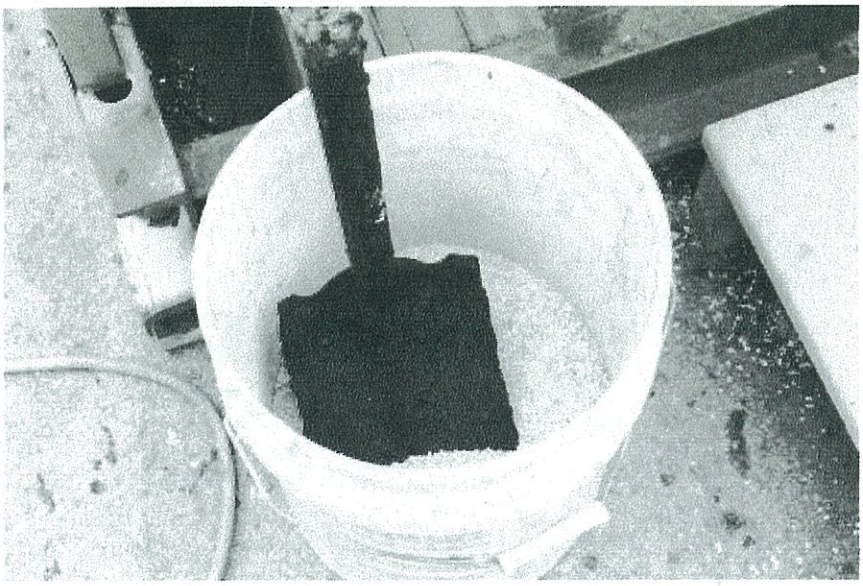

Photo 26 – Absorbent bucket near the used oil storage bin

Photo 27 – Spill kit at the maintenance yard.

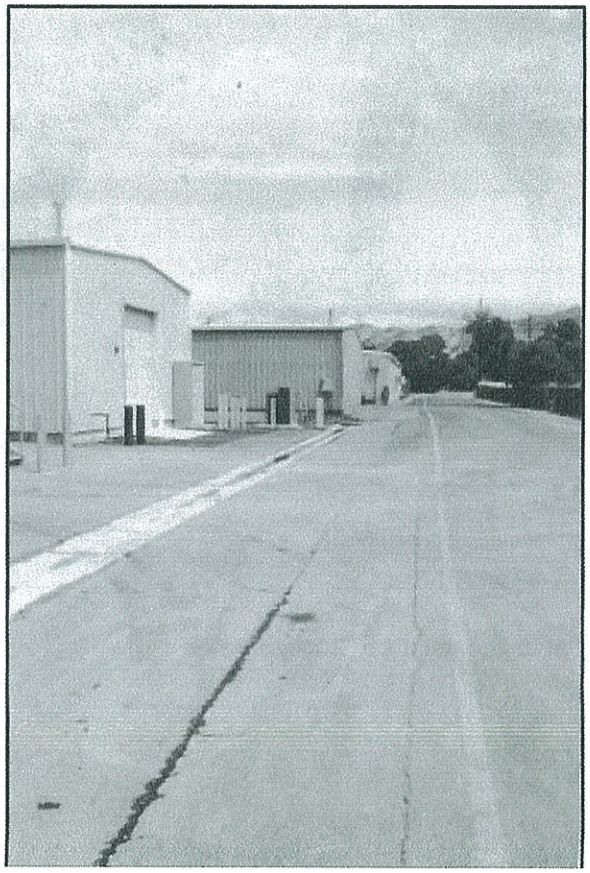

Photo 28 – Precipitation runs down this drainage into the storm drain near the green building. The flow then gets treated in the sand/oil separator before discharging.

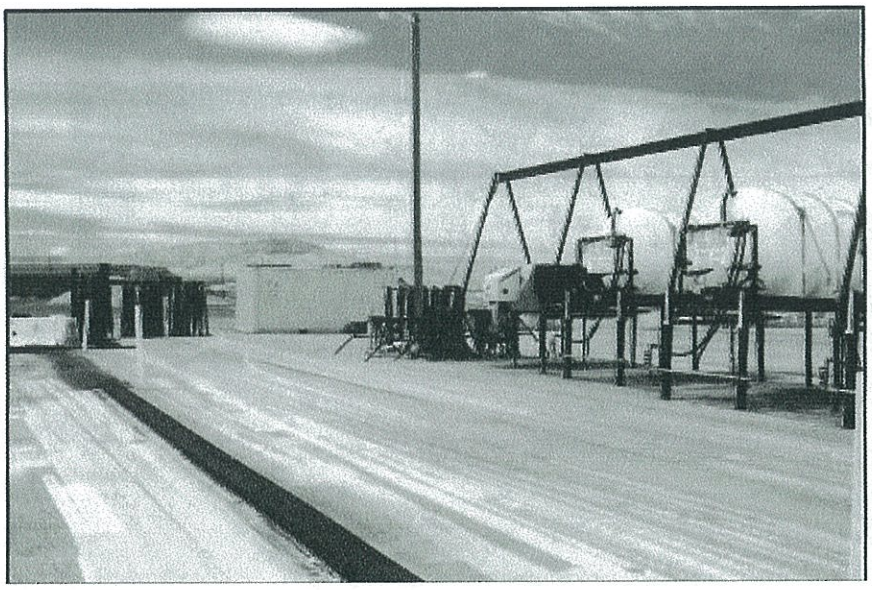

Photo 29 – Racks containing the brine solution containers that can be loaded onto the trucks.

Photo 30 – Sand/salt spreader that can be piggy-backed onto a truck. There are oil spills on the asphalt that occur when the hydraulic hoses are detached from the truck. A spill pan should be placed under the hoses to catch the spills.

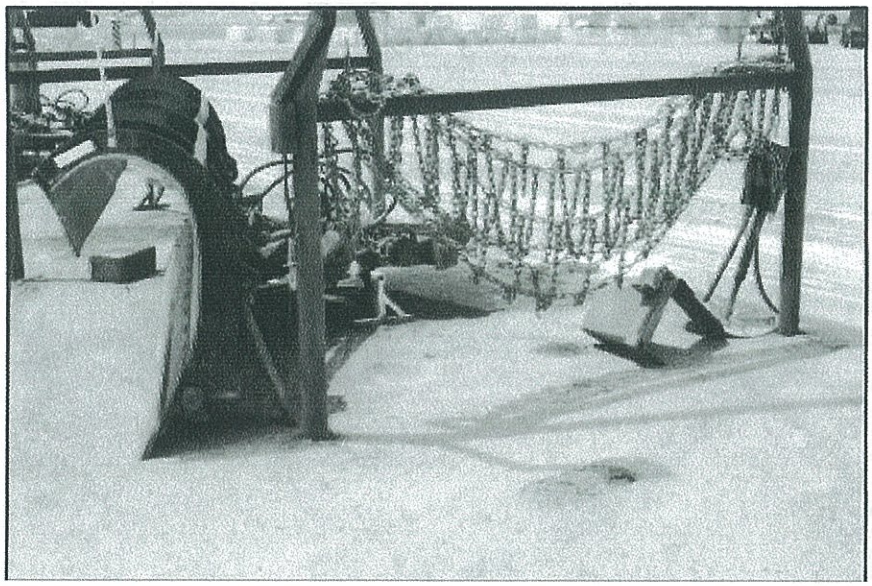

Photo 31 – Plow and tire chains for the snow plow trucks. There is oil on the asphalt from drips when the hydraulic hoses are detached from the truck. Drip pans should be placed beneath the hoses to catch any oil.

Photo 32 – Looking west across the Washoe County Maintenance Yard at the salt/sand storage pile. Maintenance staff indicated the salt/sand pile had been stored indoors in the years prior but the shed had been disassembled to make room for a separate waste water treatment plant to the west of the yard.

Photo 33 – Washoe County maintenance yard. Hydraulic fluid drips from the equipment to the ground when workers disconnect the trailers from the trucks. We suggested to the County that it develop a BMP to prevent the drips from landing on the ground where pollution can enter the storm drain.

Photo 34 – Dry debris dumped from the sweeper trucks. When the bin becomes full, Washoe County will load the material and dispose of it at the local landfill.

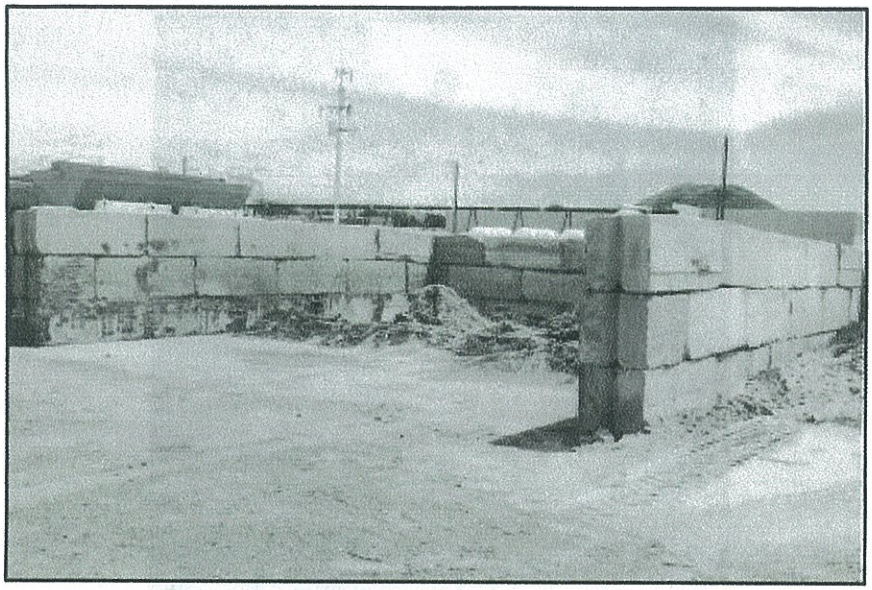

Photo 35 – This is the bin containing wet material from the vactor trucks. When the material dries, it will be taken to the local landfill for disposal.

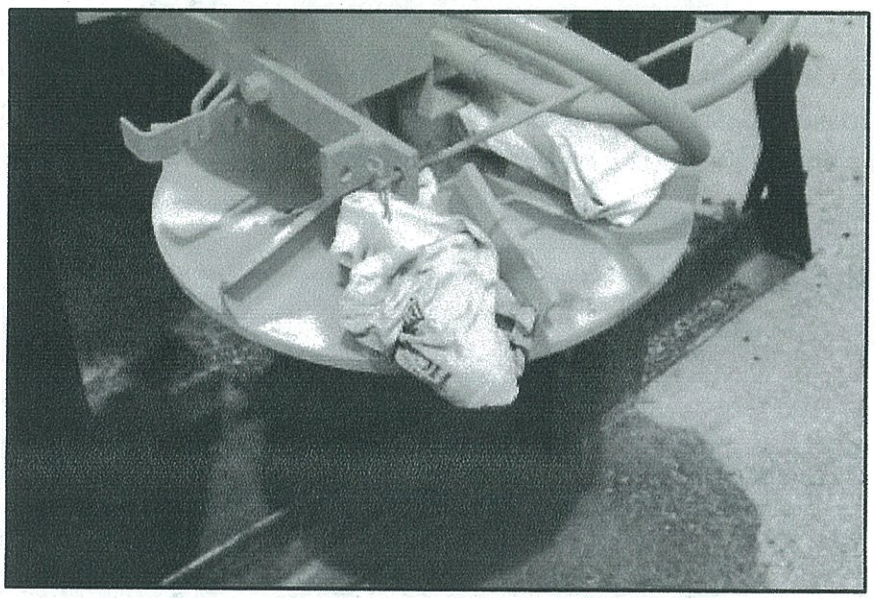

Photo 36 – Hydraulic hoses from the salt/sand spreader that show the driver has attempted to stop any drips by using rags to soak up the oil. This is a good first step to reduce oil spills, but there is evidence that oil has spilled in the past onto the asphalt. A drip pan should be used instead to catch any drips.

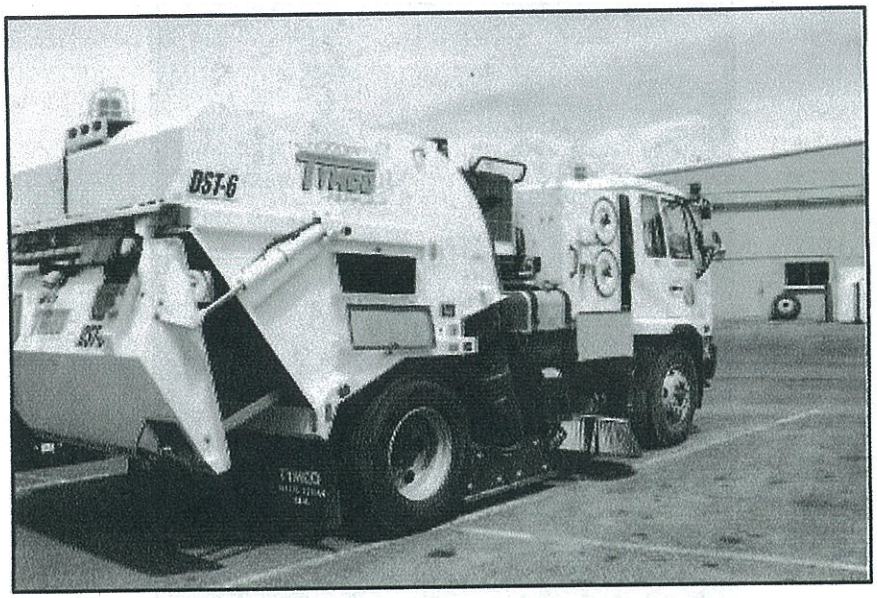

Photo 37 – One of Washoe County's street sweepers. This sweeper is equipped with a HEPA filter to sweep up extremely fine particles.

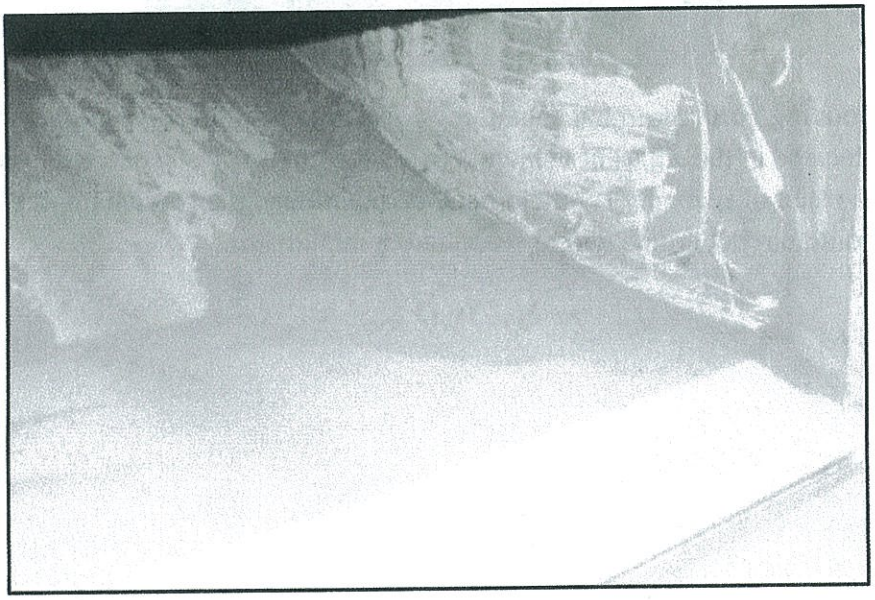

Photo 38 – Sweeper material that has been swept off the streets using the HEPA Filter-equipped sweeper. The material is very fine and like powder.

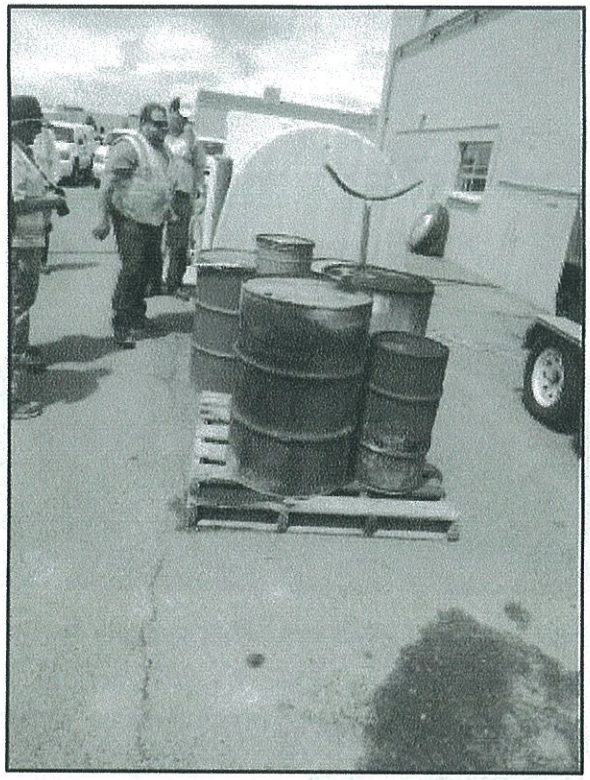

Photo 39 – View looking north of drums containing waste oil. Maintenance workers indicated the waste oil dump is located at the adjacent vehicle repair shop. When we spoke with the maintenance supervisor about the lack of secondary containment, he mentioned the service to pick up the oil was late. He said he would put the drums within secondary containment.

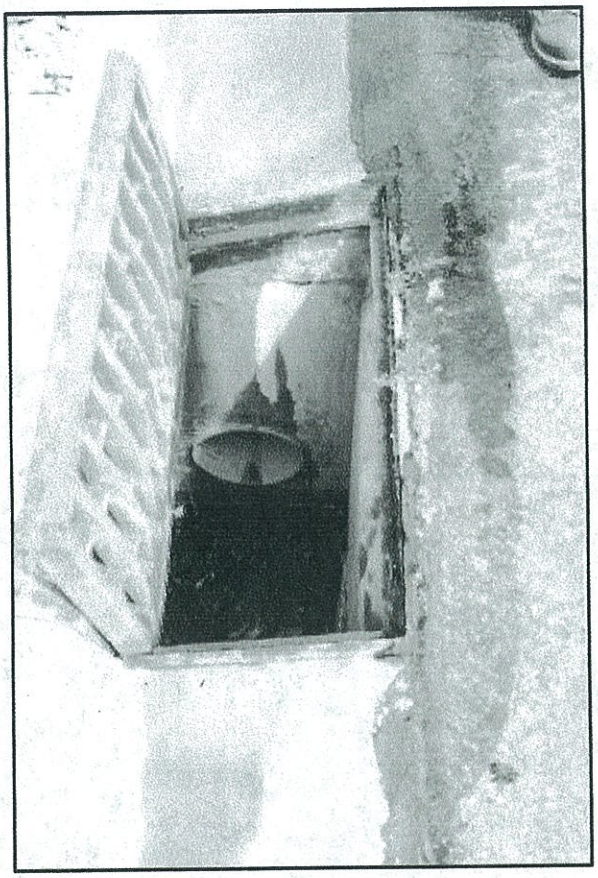

Photo 40 – View of the inside of one of the catch basins that was cleaned by Washoe County's maintenance crew.

Photo 41 – Storm drain inlet cleaning being performed by Washoe County maintenance crews.

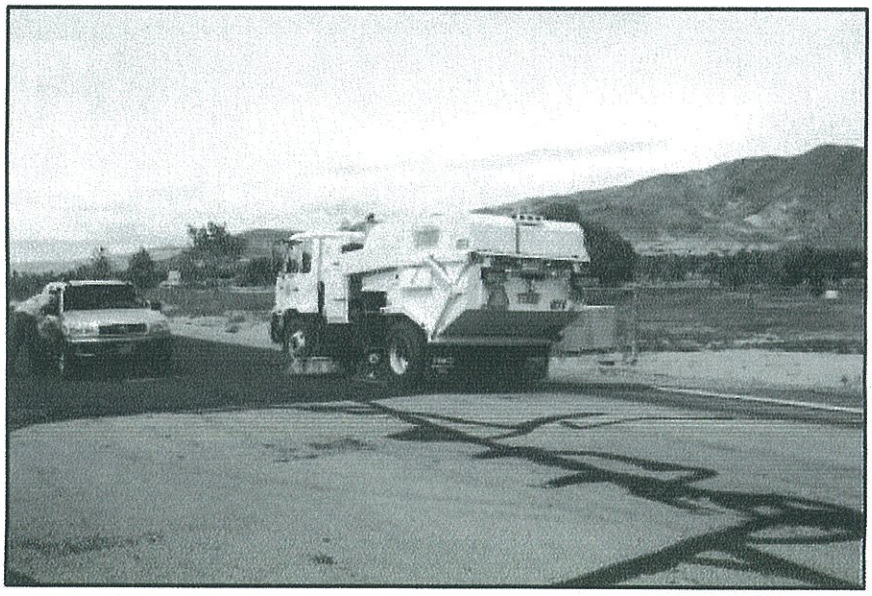

Photo 42 – One of Washoe County's sweepers at work.

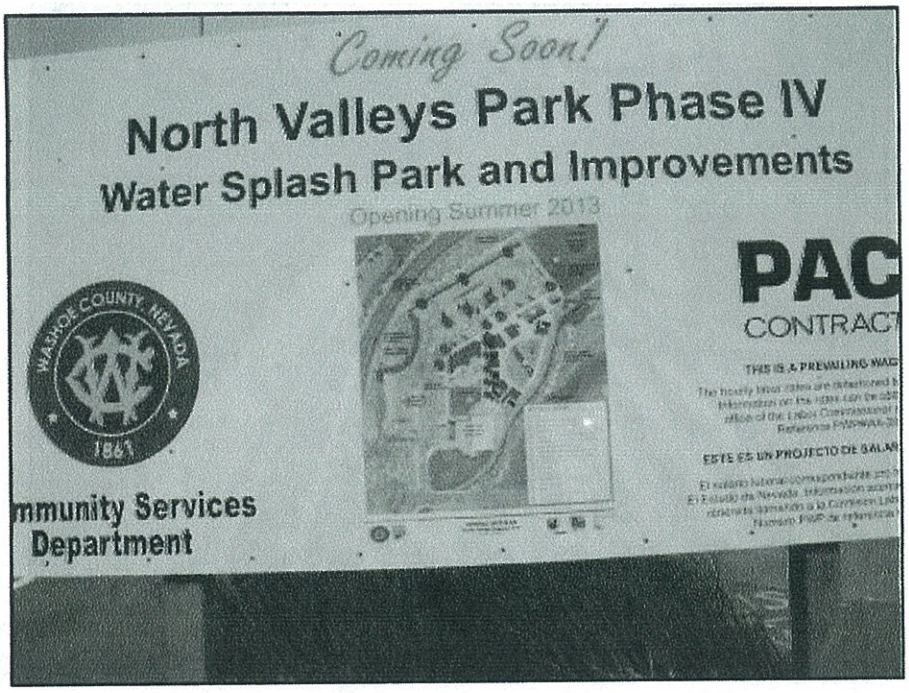

Photo 43 – Construction site sign for water park development, Washoe County.

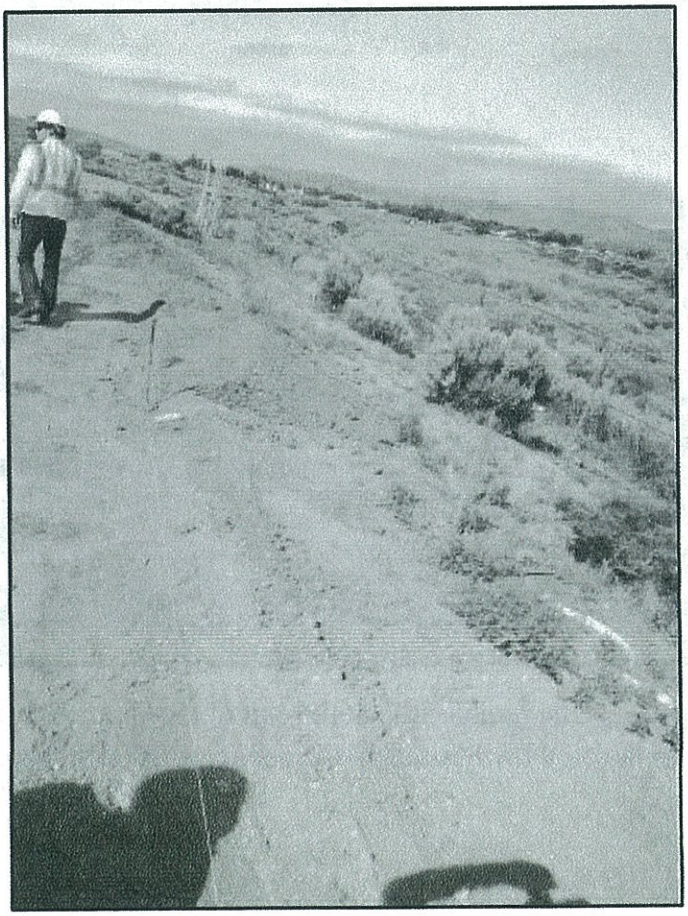

Photo 44 – Down-slope of construction site project, Washoe County. The inspector, Harold, indicated that the drainage below the site drains to a terminal basin and does not reach Waters of the US. The SWPPP for this site was a one-page map indicating rumble strips as the only BMP in place.

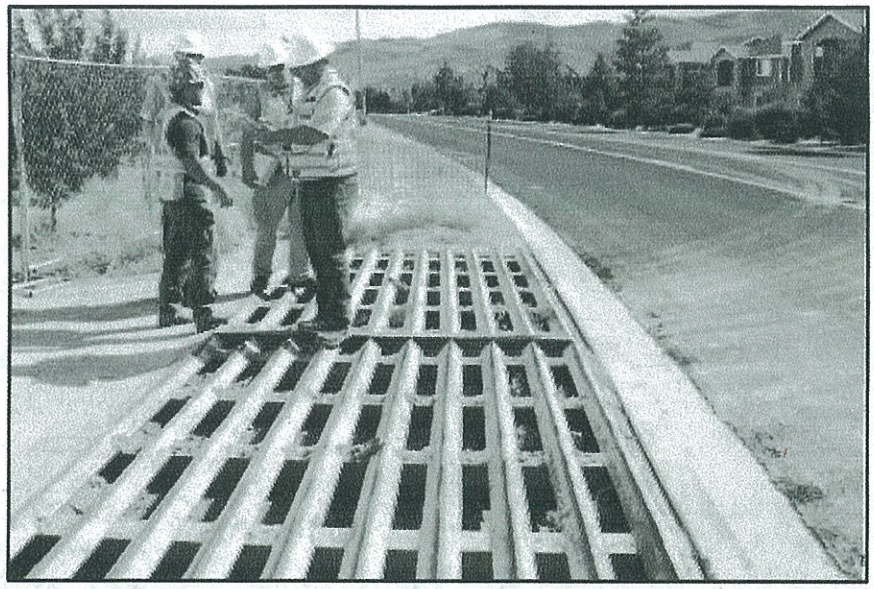

Photo 45 – Rumble strips that have been placed at the egress of the project to prevent track-out of sediment. There is evidence of track-out from the site. There was a street sweeper on-site that the foreman said cleaned the street every night when daily work was completed.

Photo 46 – View looking east at the rumble strip at the exit of the Washoe County water park construction site. This was the only BMP listed on the one-page SWPPP map.

Photos Taken on June 19th

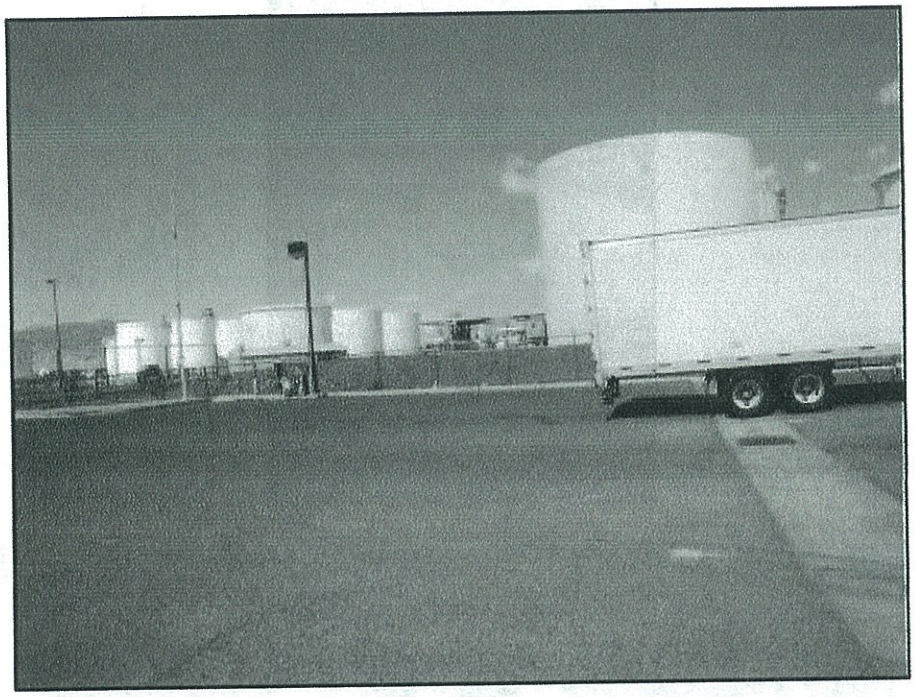

Photo 47 – Tank farm located adjacent to Bonanza Produce.

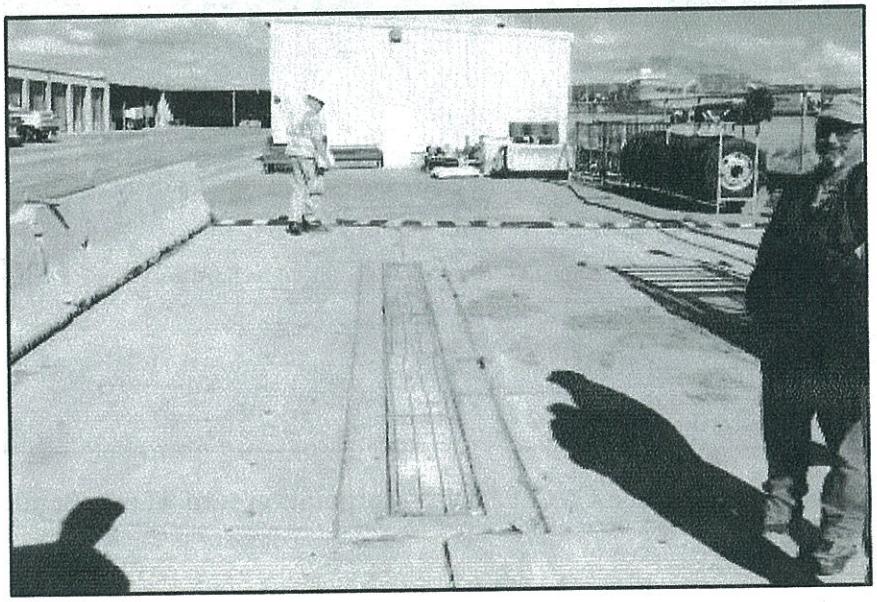

Photo 48 – City of Sparks' wash pad for vehicles and equipment

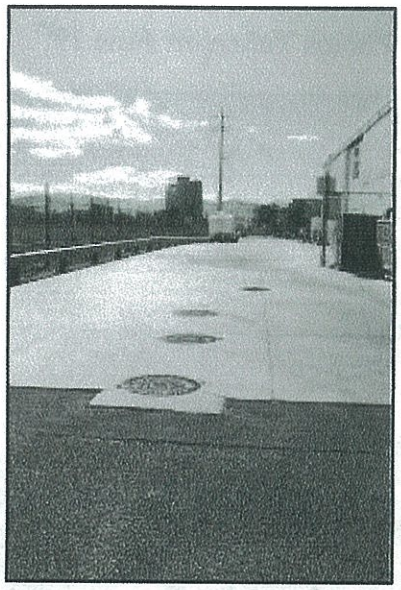

Photo 49 – City of Sparks interceptor to treat stormwater discharges and wash water before disposal in the sanitary sewer.

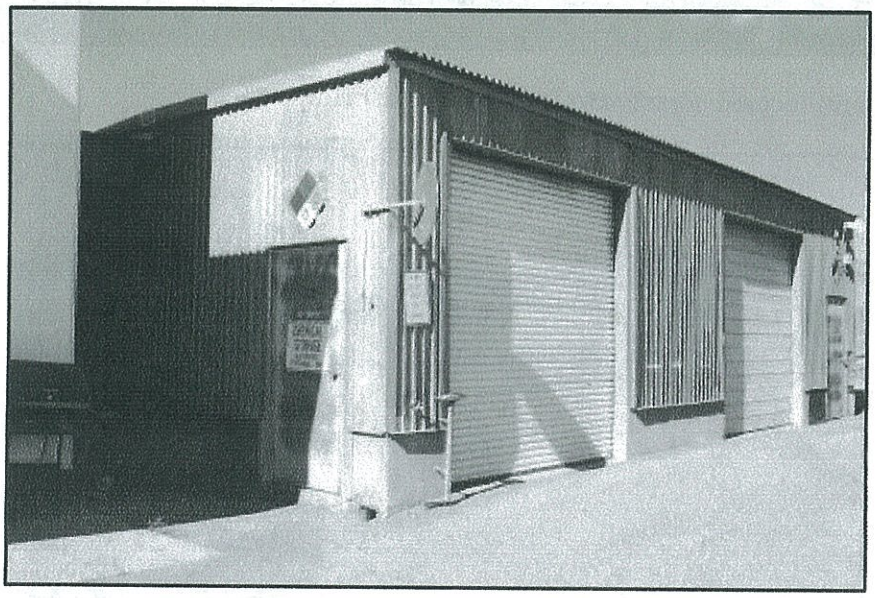

Photo 50 – One of the buildings at the City of Sparks' corporation yard where chemicals are stored and vehicles maintained.

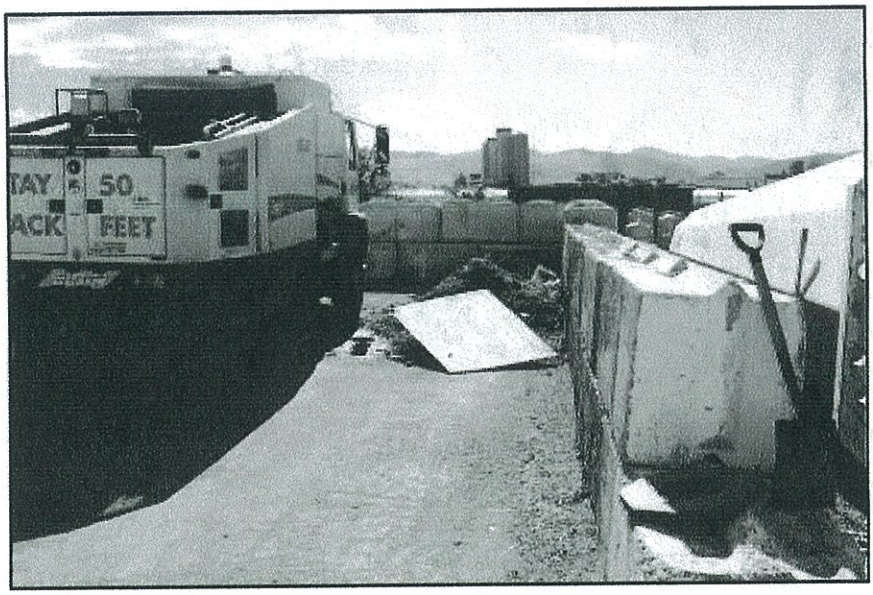

Photo 51 – One of the City of Sparks' street sweepers and waste from the sweeper. When the material dries, it will be hauled to the landfill.

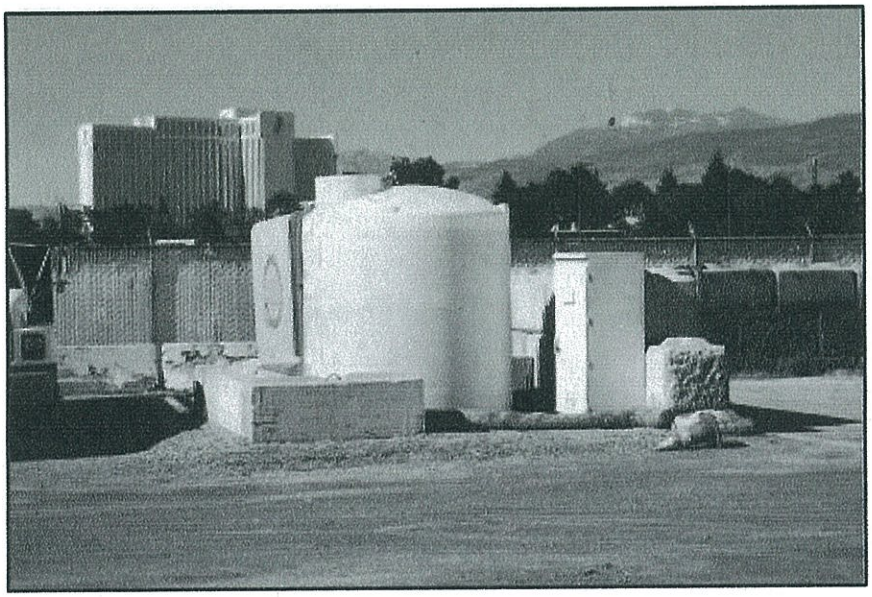

Photo 52 – Enclosure for brine storage. If there is a spill from the container, it will drain to the interceptor for treatment.

Photo 53 – Oil spills beneath one of the maintenance trucks. Drips pans should be placed beneath leaks or dripping hydraulic hoses.

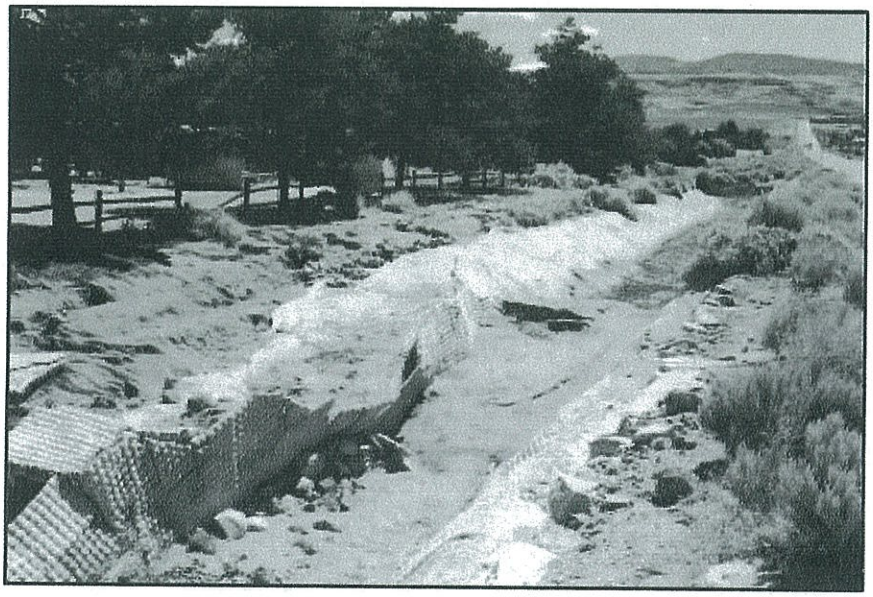

Photo 54 – Ditch along the road to Spanish Springs, City of Sparks. Sparks' employees mentioned that this ditch was inundated with water from the storm that came through the week before the audit (June 10). Sparks indicated that they would need to repair the ditch walls and bed to prevent future erosion from impacting the street.

Photo 55 – View looking west of drainage culvert underlying Las Posada Street within the Kiley Ranch North Development. This drains the detention basin called "Desert Vista Pond 1," which primarily receives drainage from natural landscape up-canyon of the development. Sparks' employees mentioned this also received a lot of flow in the storm on June 10. They said the City of Sparks' maintenance crew would need to clean this out, including the culvert.

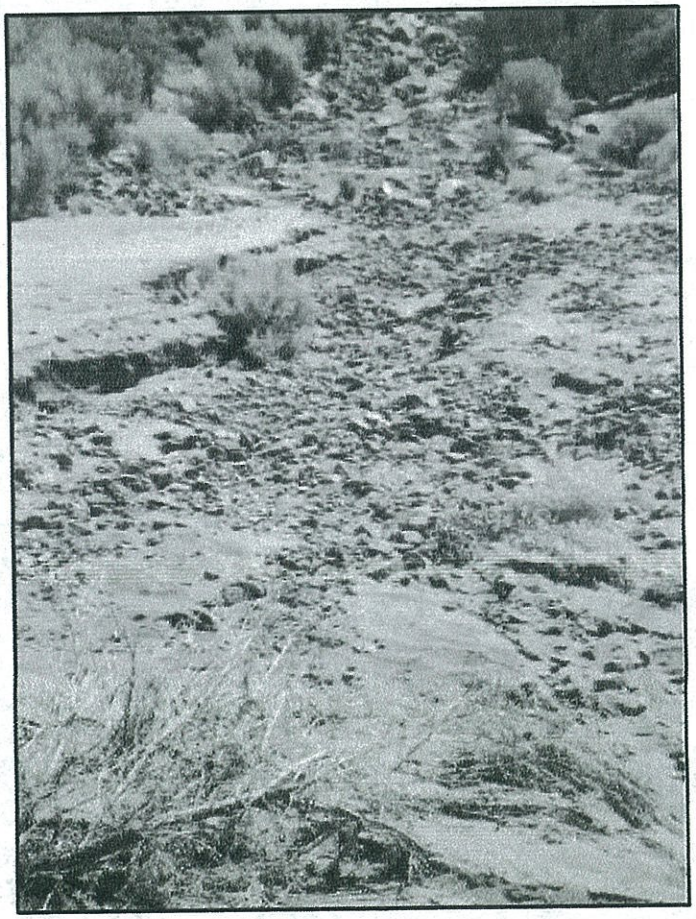

Photo 56 - View looking east of the detention pond. This pond is one of several ponds in this portion of Sparks, and it receives water from the natural landscape above the development.

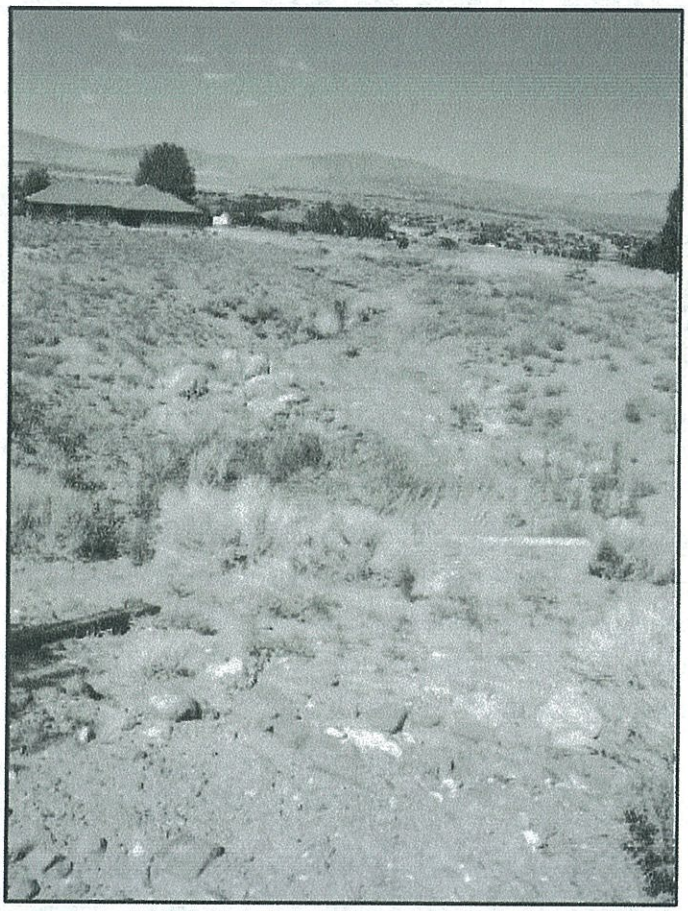

Photo 57 – Looking to the west and downstream of the culvert from detention basin in Photo 50.

Photo 58 – Looking east on the construction site for the IMAX theater, Legends Shopping Center, City of Sparks.

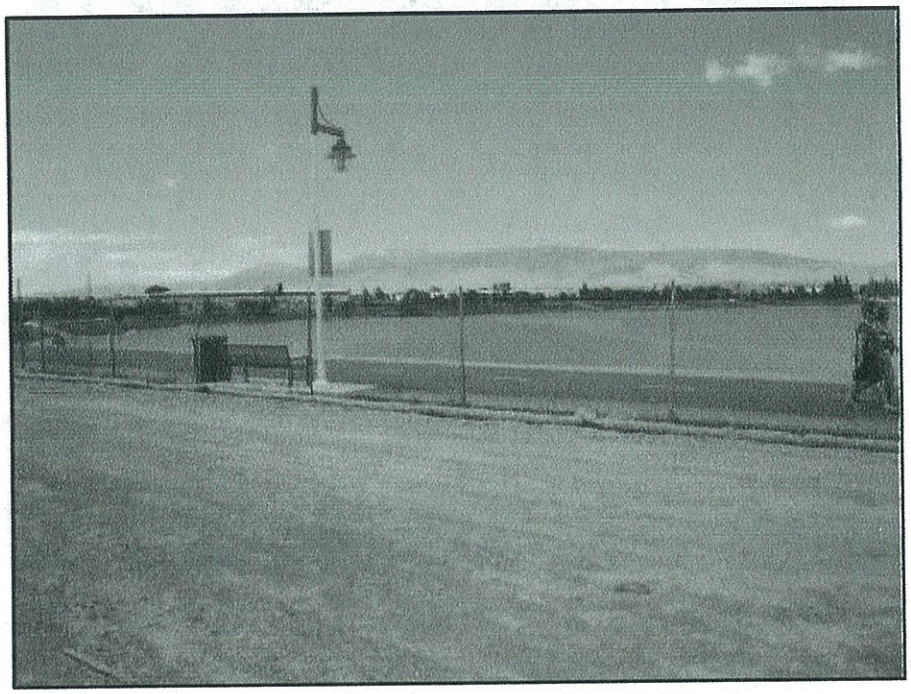

Photo 59 – Looking southwest on the IMAX construction site. Note the straw wattle along the perimeter of the portion of the site. The wattle was entrenched and staked down.

Photo 60 – Along the south perimeter of the IMAX construction site. Immediately to the right in the photo is the Legends Shopping area. Note there are no perimeter controls along this portion of the site to prevent stormwater discharges from leaving the site.

Photo 61 – City of Reno, McKinley Arts and Cultural Center. This is a Low-Impact Development project completed by the City of Reno in 2010. It incorporates rain gardens, low water plants, and pervious pavement, among other things to increase water infiltration on-site and reduce pollution discharges during storm events from leaving the site. The Truckee River is close to this site and signs are posted there and at the McKinley Center to help educate people about LID and water pollution.

Photo 62 – Close-up of the impervious pavement at the McKinley Arts Center.

Photo 63 – Parking lot at McKinley Arts Center, City of Reno. The parking lot is paved with pervious pavement.

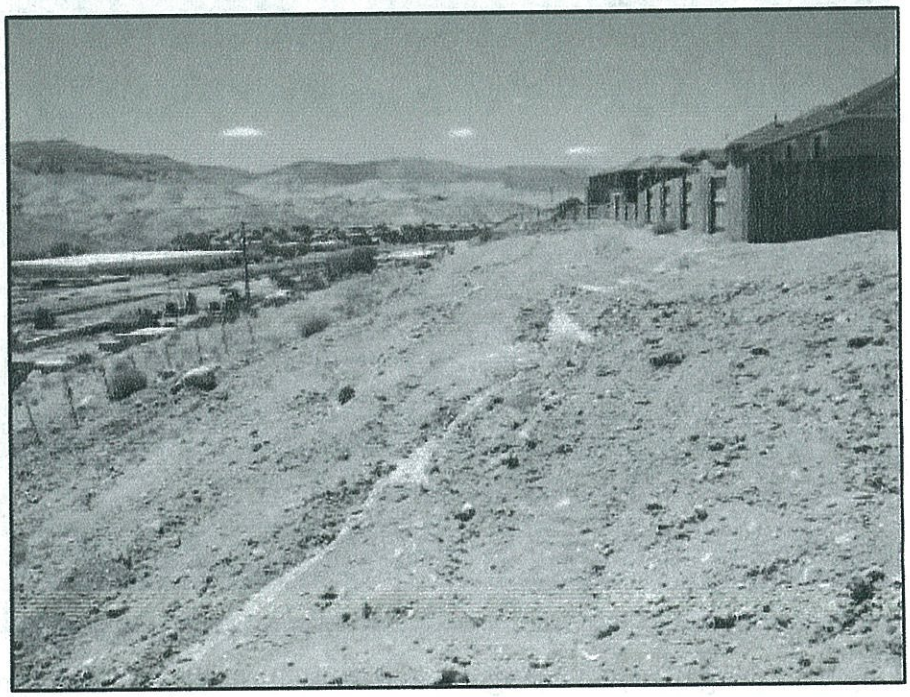

Photo 64 – Bella Rio Construction project, City of Reno. View looking west of the south-facing slope. There is disturbed soil along slope with no BMPs to retain soil onsite along the perimeter or within the slope itself. The only downslope BMPs consisted of a wire fence and vegetation. SWMPP approved by the City for the project included a silt fence, but no silt fence was in place and the contractor had decided vegetation below the site was sufficient, but had not modified the SWPPP to reflect the change.

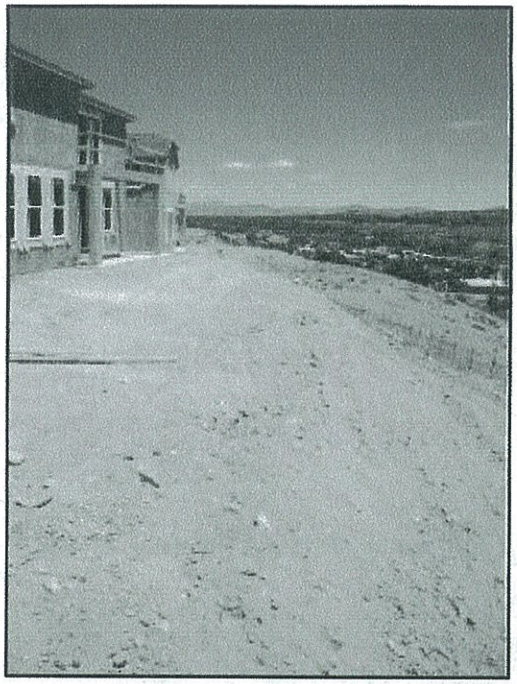

Photo 65 - View looking east of the Bella Rio construction project of the same slope in photo 20.

Photo 66 – Looking west along the south-facing slope of the Bella Rio construction project. Recent utility work involved some soil disturbance which prompted the contractor to install a straw waddle. Unclear why this was installed but no BMPs were installed elsewhere along the slope.

Photo 67 – Concrete washout bags at the Bella Rio construction site.

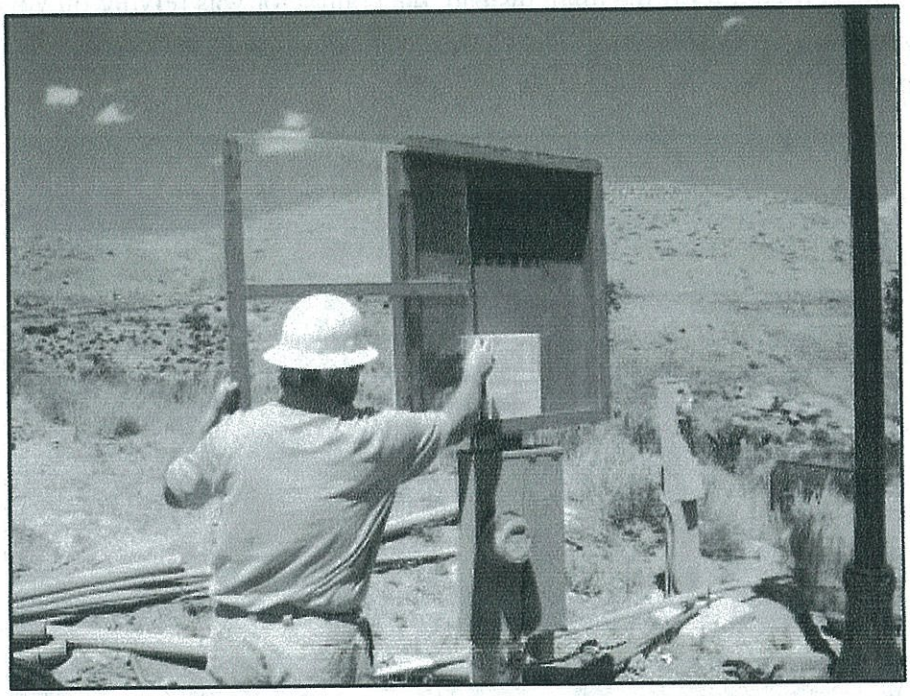

Photo 68 – Contractor removing the SWPPP from its storage location at the Bella Rio Construction site.

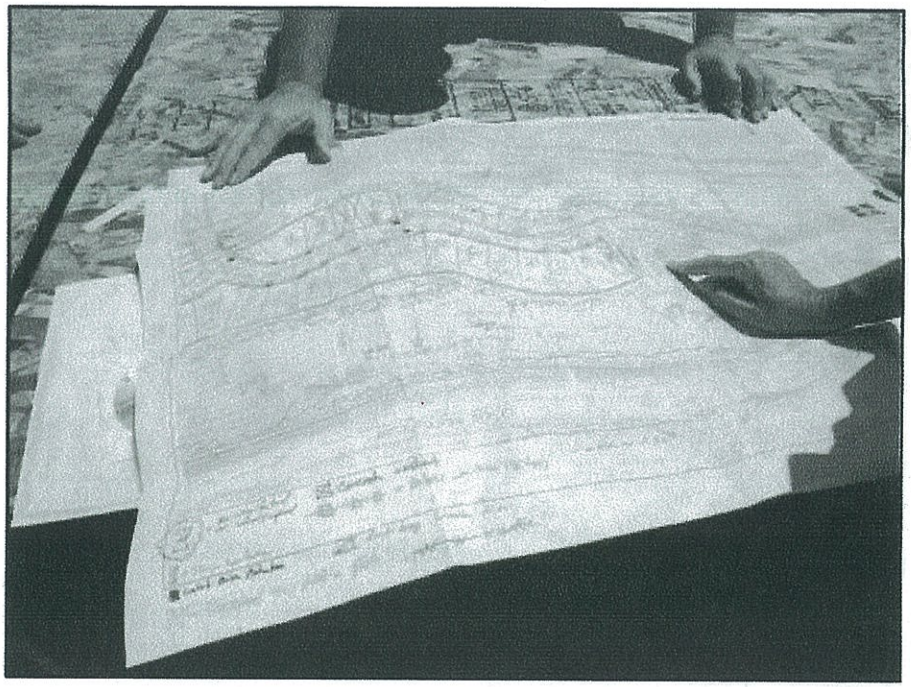

Photo 69 – Map from the City-approved SWPPP. The map indicated that silt fence was to be installed but the contractor had crossed it off the map; instead, the contractor was relying on vegetative cover and wire fence to retain on-site sediment. The change was not properly reflected in the SWPPP itself, aside from the map.

Photo 70 – Sign at the base of the road leading to the Bella Rio Home sites.

Photo 71 – Sign in front of the Cemex Site, City of Reno.

Photo 72 – View looking northeast at the front gate from immediately inside the Cemex, Reno Facility. Note the non-stormwater flow to the left and company-owned sweeper in the center of the photo. According to the area manager, the onsite water flows to the basin immediately to the left inside the front gate. The sweeper was operating continuously during our site visit in the area just inside the gate and along Galletti Way, the public street just outside the gate. Despite the cleaning operations, there was evidence of track-out from this site.

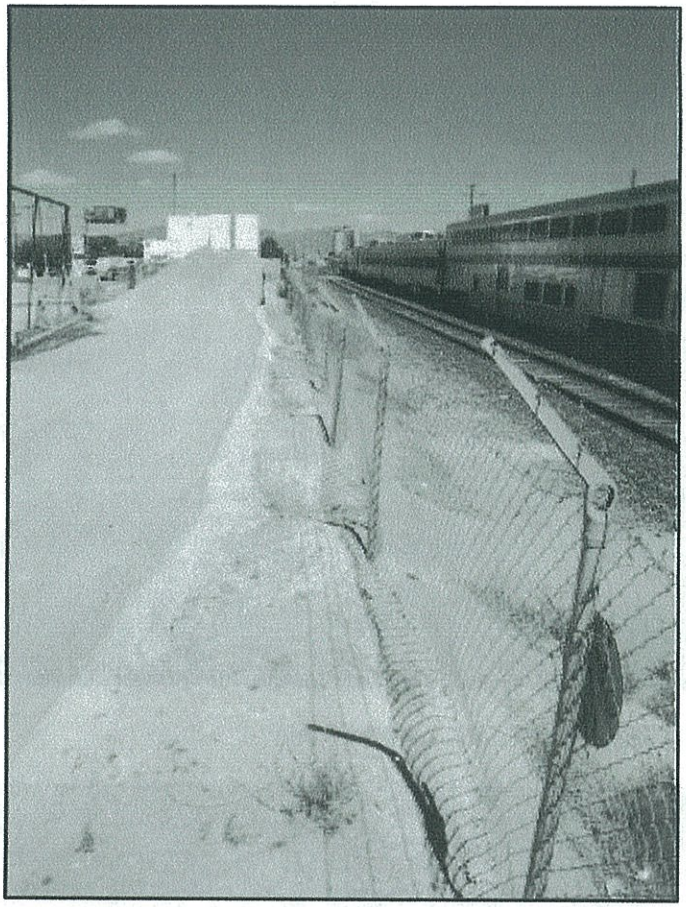

Photo 73 – View looking east along the southern boundary of the Cemex Ready-Mix site. Note the material overflowing the perimeter structures.

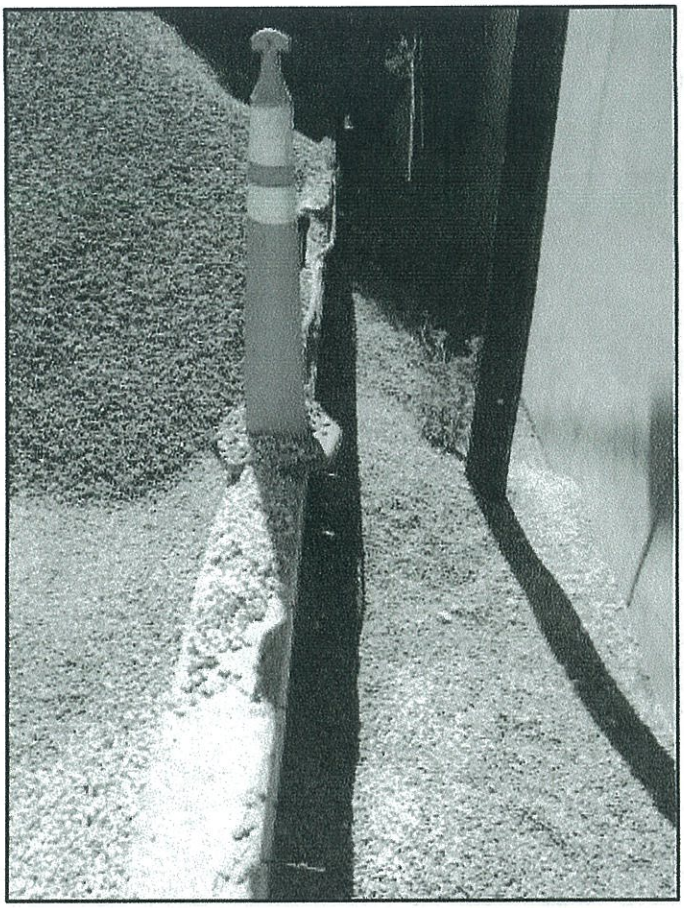

Photo 74 - View looking west along the northern perimeter of the Cemex Ready-mix plant. Note, again, the lack of a proper perimeter structure to prevent material from leaving the site.

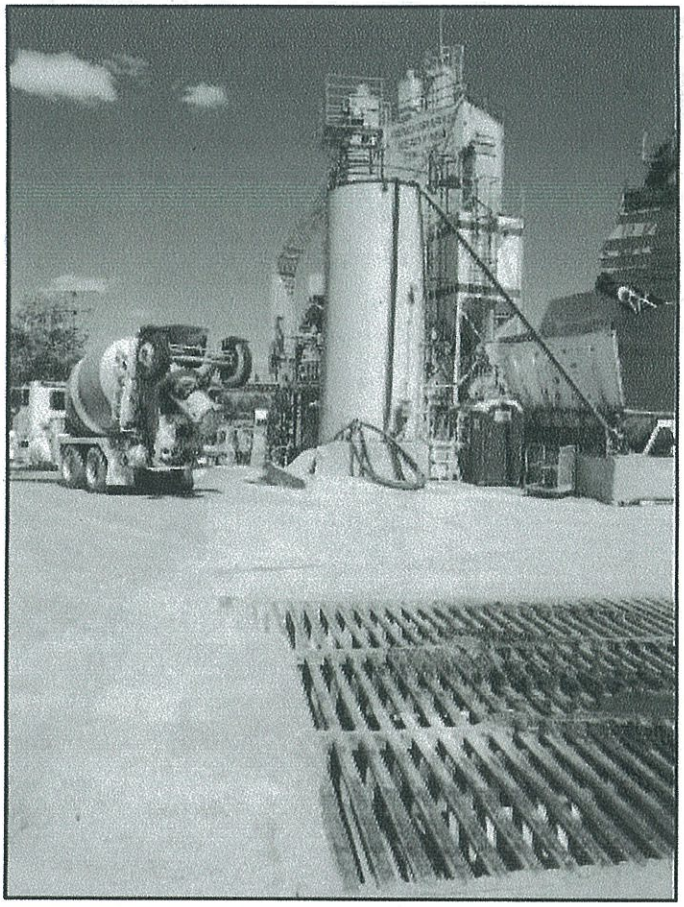

Photo 75 – View overlooking the Cemex Ready-mix facility in Reno. View looking east. The grate in the foreground allows trucks to dump the aggregate material onto the grate and into the sub-grade storage area for distribution within the site using a conveyor system.

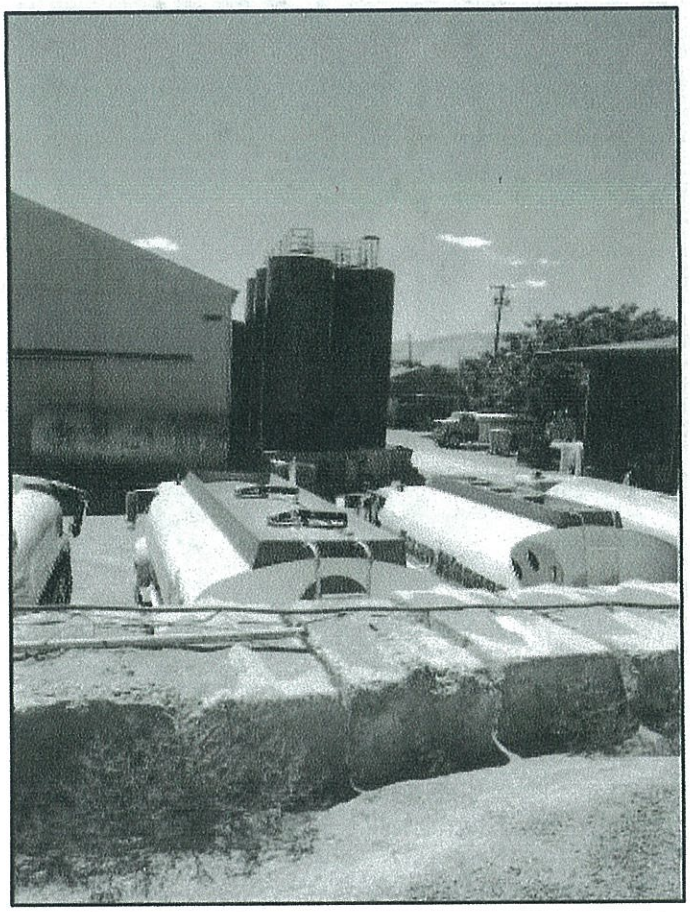

Photo 76 – View looking west from atop the raw material storage pile. The facility to the west is an Allied Washoe Oil facility.

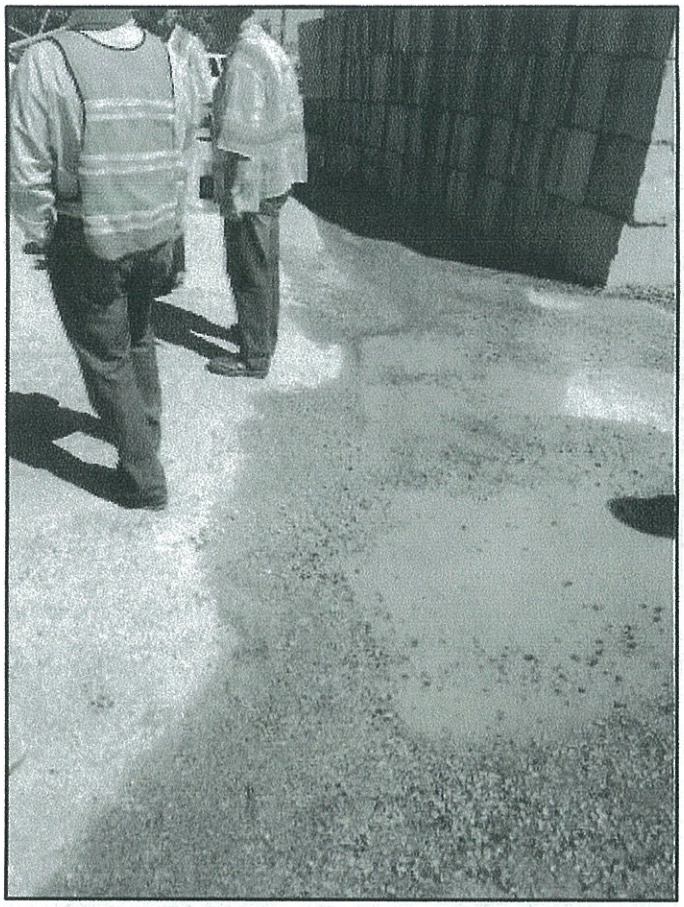

Photo 77 – View of aggregate wash water flowing on ground at the Cemex Ready-mix plant. This was is collected in the basin immediately inside the front gate.

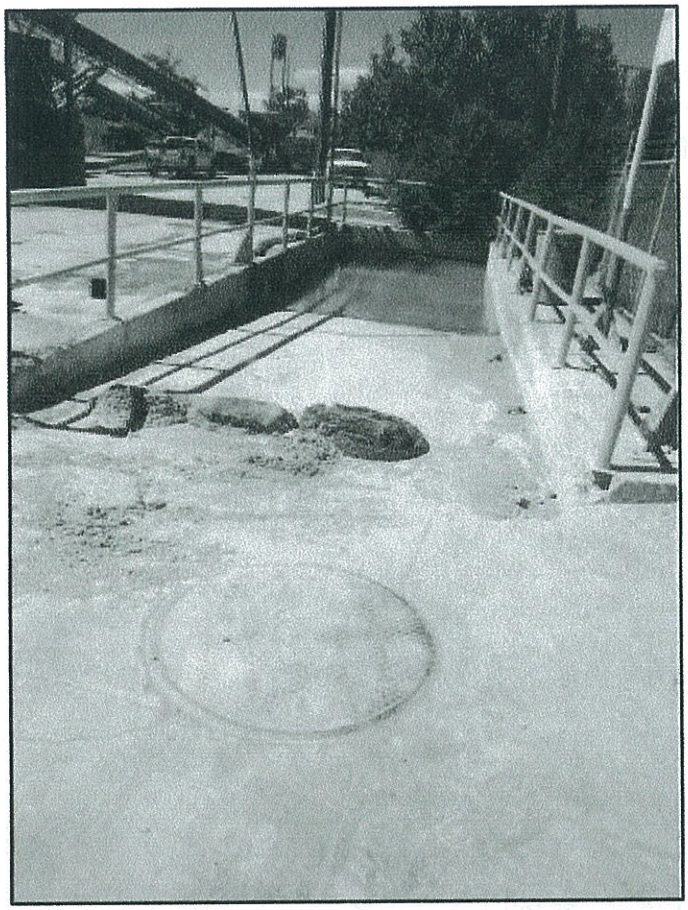

Photo 78 – View looking north of one of two water collection basins at the Cemex Ready mix plant in Reno. Water is collected and used as dust suppressant in the wash yard to the east across Galletti Way.

Photo 79 – Storm drain at the corner of E. Galletti Way and 4th Street in Reno. Immediately adjacent to this drain is the Cemex Ready-Mix plant where raw materials stored at the plant are overflowing certain structures. The poor on-site storage practices (including track-out) at this facility may lead to material entering this and other stormdrains in the area.

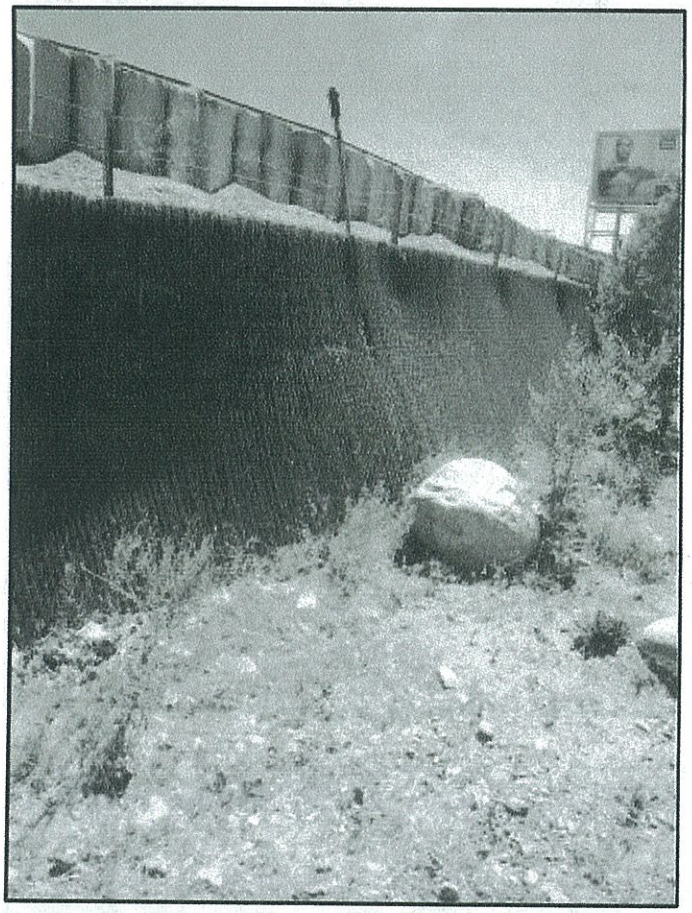

Photo 80 – View looking west of the fence along the northeast corner of Cemex Ready Mix plant in Reno. This fence is immediately adjacent to the storm drain shown in picture IMGP 00035.

Photo 81 – View looking east of the Wash-Out Yard, across the street on Galletti Way from the Cemex Ready-mix plant. According to the Area Manager at Cemex, this sprawling open area is located in the City of Sparks (not Reno) and used by Cemex employees to wash Cemex trucks. There appeared to be material from this facility that also was spilling over or through some of the perimeter structures.

Photo 82 – View looking northeast of the truck wash out area. Note the standing water in the low-lying areas to the east from where the photo was taken.

Photo 83 –View looking south west at the washout area of the Cemex facility in Reno. Note the standing water in the foreground and the mound of material stockpiled in the area. The Area Manager indicated that 30-45 trucks use this facility each day to dump excess concrete (if any) and wash out their trucks.

Photo 84 – Cemex Wash-Out Yard in Reno. This photo is taken along the northwest boundary of the Wash Out Yard. There were no controls along this portion of the Yard to prevent excess rainwater or process water from leaving the site.

Photo 85 – View along Galletti Way looking north as an aggregate truck leaves the site. Note the track out from the facility to the public street. The facility sweeps the yard and street regularly.